

IronHorse® Permanent-Magnet DC Motors (SCR Rated) Model Overview



MTPM-P10-1JK43



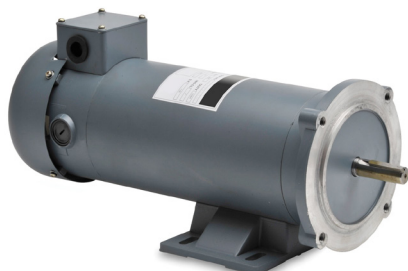
MTPM-P25-1JK44



MTPM-P33-1L18



MTPM-P75-1L18



MTPM-1P5-1M18

IronHorse motors are manufactured by leading motor suppliers with over 20 and 45 years experience delivering high-quality motors to the demanding U.S. market. Our suppliers test the motors during production and after final assembly. This is how we can stand behind our IronHorse motors with a two-year warranty (motors 1/3 hp and above only; motors 1/4 hp and less have a one-year warranty).

IronHorse DC motors are designed for use on unfiltered SCR (Thyristor) type and PWM (pulse width modulated) type DC adjustable speed drives, and on across-the-line DC controls.

The IronHorse line of DC motors features:

- Replacement brush sets
- Simple two-lead connection
- Class F insulation

Features for Small-Frame Motors 1/4 hp and Under

- Available models accommodate 12VDC, 24VDC, 90VDC (110VAC DC drive), and 180VDC (230VAC DC drive)
- Rated for SCR drives
- TENV enclosure
- IP40 environmental rating
- Class F insulation
- High energy ceramic magnets
- Double shielded ball bearings
- Dynamically balanced armature
- Reversible design
- 18-inch leads, or junction boxes with 8-inch leads
- Externally replaceable brushes
- Can be mounted in any orientation
- Not intended for DC power generation
- UL recognized (E365956), CSA certified (259724), RoHS

Features for Motors 1/3 hp and Above

- Input power of 115 or 230 volts rectified AC can be used with an appropriate SCR drive
- Linear speed/torque characteristics over entire speed range
- High starting torque for heavy load applications
- Capable of dynamic braking for faster stops
- Available in TENV or TEFC housings, depending on model
- NEMA 56C flange mount
- Rolled steel shell frame / cast aluminum end bell
- Removable base (0.33–2 hp)
- STABLE motor slide bases for adjustable mounting of NEMA motors from 56–449T
- Space-saving design
- Large replaceable brushes for longer brush life
- Easy access to DC motor brushes (DC motors ship with one set of brushes installed and one set of spare brushes in the box)
- Large easy-to-wire junction box with rubber gasket and six-inch leads
- Heavy duty oversized ball bearings
- High tensile strength steel shaft
- Large easy to read nameplate
- Electrically reversible
- Not intended for DC power generation
- Service Factor: 1.0
- Two year warranty
- cCSA_{US} certified (247070), CE, RoHS

Applications

- Conveyors
- Turntables
- Where adjustable speed and constant torque are required
- When dynamic braking and reversing capabilities are needed

IronHorse® DC Motors

MTPM Small-Frame Permanent Magnet DC Motors – 1/31 hp – 1/4 hp



MTPM-P10-1JK43
with flying leads



MTPM-P25-1JK44
with junction box

Selection and Specifications

Motor Specifications – MTPM Series Small-Frame Permanent Magnet DC Motors													
Part Number	Price	Voltage (VDC)	HP	Speed (rpm)	F/L Torque (oz-in)	F/L Current (A)	Shaft Dia (in)	Pilot Shaft (in)	Overhung Load (lb)	Axial/Thrust Load (lb)	Wiring Type	Weight (lb)	Drawing Links
MTPM-P10-1JK43	\$137.00	12/24	1/20	1746	28	4.83	0.3125	1.00	85	70	flying leads	2.75	PDF
MTPM-P13-1JK42	\$148.00	12/24	1/17	1825	32	5.39	0.3125					3.25	PDF
MTPM-P17-1JK43	\$197.00	12/24	1/13	1841	42	7.54	0.50	2.02	130	150	junction box	5.3	PDF
MTPM-P25-1JK40	\$205.00	12/24	1/6	1732	96	14.3	0.50					7.8	PDF
MTPM-P25-1JK44	\$205.00	12/24	1/5	1854	113	18.1	0.50					9	PDF
MTPM-P03-1L18	\$143.00	90	1/31	1797	18	0.39	0.3125	1.00	85	70	flying leads	2.75	PDF
MTPM-P04-1L17	\$151.00		1/26	1749	22	0.46	0.3125					3.25	PDF
MTPM-P05-1L19	\$197.00		1/19	1917	28	0.68	0.50	2.02	130	150	junction box	5.3	PDF
MTPM-P13-1L19	\$195.00		1/8	1917	73	1.4	0.50					7.8	PDF
MTPM-P14-1L19	\$212.00		1/7	1740	86	1.61	0.50					9	PDF
MTPM-P07-1M24	\$176.00	180	1/15	2440	28	0.42	0.50	2.02	130	150	junction box	5.3	PDF
MTPM-P13-1M19	\$212.00		1/8	1865	73	0.73	0.50					7.8	PDF
MTPM-P14-1M18	\$212.00		1/7	1828	84	0.83	0.50					9	PDF



MTPM-BRUSH-x



MTGA-KIT-1

Replacement Parts

Replacement Parts for MTPM Series Small-Frame Permanent Magnet DC Motors *			
Part Number	Price	Description	For Motors MTPM-
MTPM-BRUSH-4	\$39.00	DC motor brushes, replacement, for 1/4 hp 24VDC MTPM series permanent magnet DC motors. Package includes one set of 2 brushes and 2 brush caps.	P25-1JK40, P25-1JK44, P17-1JK43
MTPM-BRUSH-5	\$30.00	DC motor brushes, replacement, for 24VDC MTPM series permanent magnet DC motors 1/6 hp and smaller. Package includes one set of 2 brushes and 2 brush caps.	P10-1JK43, P13-1JK42,
MTPM-BRUSH-6	\$33.00	DC motor brushes, replacement, for 1/7 or 1/8 hp 90VDC or 180VDC MTPM series permanent magnet DC motors. Package includes one set of 2 brushes and 2 brush caps.	P13-1L19, P14-1L19, P13-1M19, P14-1M18
MTPM-BRUSH-7	\$27.00	DC motor brushes, replacement, for 90VDC or 180VDC MTPM series permanent magnet DC motors 1/10 hp and smaller. Package includes one set of 2 brushes and 2 brush caps.	P03-1L18, P04-1L17, P05-1L19, P07-1M24
MTGA-KIT-1	\$51.00	DC motor spare parts kit, for certain MTPM series permanent magnet DC motors as listed. Includes: two metal brush cap covers, one terminal box, one 1/8 (0.125 inch) shaft key and one 3/16 (0.187 inch) shaft key.	P05-1L19, P13-1L19, P14-1L19, P17-1JK43, P25-1JK40, P25-1JK44, Pxx-1Mxx

* These replacement parts also fit many AutomationDirect DC gearmotors. Refer to the Gearmotors section for gearmotor application information.

IronHorse® DC Motors

56C Frame TEFC/TENV Motors – DC – 0.33 to 2 hp



Motor Specifications – DC 56C Frame Motors – 1800 RPM										
Part Number	Price	HP	Base RPM	Armature Voltage	Housing	NEMA Frame	Service Factor	F.L. Amps	Weight (lb)	Drawing Links
MTPM-P33-1L18	\$234.00	1/3	1800	90 VDC	TENV	56C flange mount	1.0	3.5	17.70	PDF
MTPM-P50-1L18	\$301.00	1/2						5.2	20.74	PDF
MTPM-P75-1L18	\$341.00	3/4						7.8	25.30	PDF
MTPM-001-1L18	\$378.00	1						10.4	28.36	PDF
MTPM-1P5-1L18	\$410.00	1-1/2						15.4	34.97	PDF
MTPM-P33-1M18	\$231.00	1/3		180 VDC	TENV			1.75	17.60	PDF
MTPM-P50-1M18	\$300.00	1/2						2.6	20.74	PDF
MTPM-P75-1M18	\$341.00	3/4						3.9	25.58	PDF
MTPM-001-1M18	\$378.00	1						5.2	28.32	PDF
MTPM-1P5-1M18	\$410.00	1-1/2						7.7	35.70	PDF
MTPM-002-1M18	\$652.00	2			9.8	61.95	PDF			

Note: Please review the AutomationDirect Terms & Conditions for warranty and service on this product.

Performance Data – DC 56C Frame Motors – 1800 RPM																	
Part Number	HP	Armature Voltage	Torque (lb-ft)	Form Factor *	Ambient Temp.	Insulation Class	Ball Bearings		Mounting	Wire / Housing	Shaft	Constant Torque Speed Range	Overall Speed Range	Base / Type	Paint Color	Rotor Inertia (kg·m ²)	Efficiency (%)
			Full Load				DE Bearing	ODE Bearing									
MTPM-P33-1L18	1/3	90 VDC	0.97	1.35	40°C (104°F)	F	6203	6203	Top Mounted	Junction Box	Keyed	90-1800 RPM	0-2000 RPM	Rigid Removable	Gray	0.01956	79
MTPM-P50-1L18	1/2		1.46													0.02365	
MTPM-P75-1L18	3/4		2.19													0.02795	
MTPM-001-1L18	1		2.92													0.03225	
MTPM-1P5-1L18	1-1/2		4.38													0.04945	
MTPM-P33-1M18	1/3	180 VDC	0.97													0.01956	79
MTPM-P50-1M18	1/2		1.46													0.02365	
MTPM-P75-1M18	3/4		2.19													0.02795	
MTPM-001-1M18	1		2.92													0.03225	
MTPM-1P5-1M18	1-1/2		4.38													0.04945	
MTPM-002-1M18	2	5.84	0.09675	85													

* See additional information in Form Factor Table.

Form Factor

The voltage used to power a permanent magnet (PM) DC motor is not pure DC; it is derived by rectifying a supplied AC voltage. The resulting DC voltage has a ripple that is related to the frequency of the AC input.

Form factor is the ratio of I_{rms} to I_{dc} , and it indicates how close the driving voltage is to pure DC. The form factor for a DC battery is 1.0. The higher the form factor is above 1.0, the more it deviates from pure DC. The Form Factor Table shows examples of commonly used voltages.

Form factor should not exceed 1.40 for continuous operation. Half wave rectification is not recommended, as it drastically increases form factor.

Operating Ironhorse PMDC motors with DC voltages with form factors higher than 1.40 can result in premature brush failure and excessive motor heating.

Form Factor Table	
Form Factor	DC Voltage Source
1.0	Battery (pure DC)
1.05 *	Pulse width modulation (PWM)
1.40 **	Full wave rectification (1-phase)
1.9 ***	Half wave rectification (1-phase) **

* All DC-input IronHorse GSD series DC drives are 1.05. IronHorse AC-input GSD5 DC drive is 1.05.

** 1-phase full wave rectification is the most common form of DC drive in 0.33–2 hp range. All IronHorse GSD series DC drives are 1.40 or better.

*** Not Recommended.

IronHorse[®] DC Motors

56C Frame Motors – DC – 0.33 to 2 hp – Accessories



DC motor brushes

Brushes commutate the incoming current in a DC motor. All IronHorse PMDC motors are shipped with a set of brushes in the motor. An extra set of brushes is included in the box. The brushes below can be ordered for spare.

IronHorse DC brushes should be changed at a maximum interval of 2500 hours motor runtime. When changing brushes, always change them as a set (never change only one brush).

DC Motor Accessories							
Part Number	Price	Description	Applicable Motor Type	Rated Voltage	Motor HP	Brush Materials	Dimension L x W x H
<u>MTPM-BRUSH-1</u>	\$15.50	Brushes with springs, one set of 2	IronHorse MTPM	90 VDC 180 VDC	0.33–1.5 hp	Resin class Graphite	0.75 in x 0.27 in x 0.70 in 19 mm x 6.9 mm x 18 mm
<u>MTPM-BRUSH-2</u>	\$20.00	Brushes with springs, one set of 2		180 VDC	2hp		0.71 in x 0.49 in x 0.70 in 18 mm x 12 mm x 18 mm
<u>MTPM-BRUSH-3</u>	\$18.00	Brushes with springs, one set of 2		90 VDC	1.5 hp		0.73 in x 0.35 in x 0.63 in 19 mm x 8.9 mm x 16 mm

All IronHorse 56C-frame DC motors ship with one set of brushes installed and one extra set in the box.

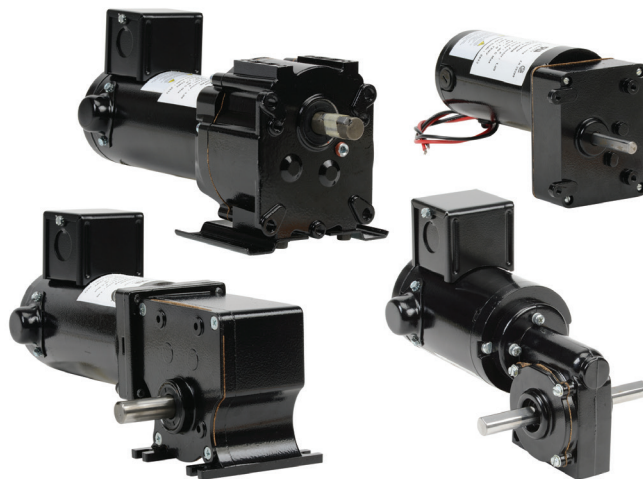
IronHorse® DC Gearmotors

Series MTG Gearmotors – 1/19 hp – 1/5 hp

Model Overview

IronHorse DC gearmotors are manufactured in the U.S.A. by a leading motor supplier with over 65 years experience delivering high-quality motors and gearmotors to the demanding U.S. market. Our supplier does 100% dynamic testing of the gearmotors before shipment.

IronHorse DC gearmotors are designed for use on unfiltered SCR (Thyristor) type rectified AC input. They may also be used with PWM (pulse width modulated) type DC adjustable speed drives, and in across-the-line applications.



Applications

- Conveyors
- Turntables
- Pick and place
- Indexers
- Small machinery
- Where reduced speed and/or increased torque are required

General Features

- Available in 12, 24, and 90 VDC
- Available from 1/19 to 1/5 hp
- Available with parallel or right-angle gear shafts

Gearmotor Features

- TENV enclosure
- IP40 environmental rating
- Class F insulation
- SCR rated
- Externally replaceable brushes
- Double-shielded bearings
- Dynamically balanced armature
- Reversible design
- 18-inch leads, or junction box with 8-inch Leads
- Replacement components are available
- Orientation restrictions vary depending on model. See illustrations for details
- Not intended for DC power generation
- UL recognized (E365956), CSA certified (259724), RoHS

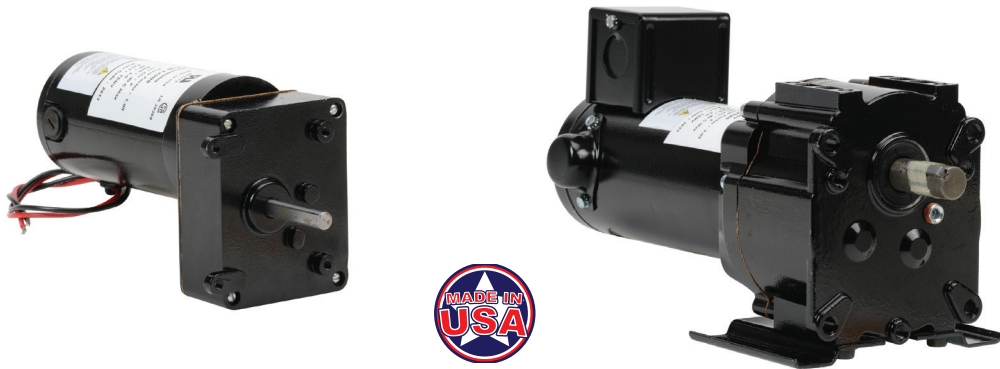
Replacement Parts for MTGP and MTGR DC Gearmotors

Replacement Parts for MTGP and MTGR Series DC Gearmotors *			
Part Number	Price	Description	For Gearmotors
<u>MTPM-BRUSH-4</u>	\$39.00	DC motor brushes, replacement, for 1/5 hp 12VDC or 24VDC MTGR and MTGP series DC gearmotors. Package includes one set of 2 brushes and 2 brush caps.	MTGx-P20-1Jxxx, MTGx-P20-1Kxxx
<u>MTPM-BRUSH-5</u>	\$30.00	DC motor brushes, replacement, for 12VDC or 24VDC MTGR and MTGP series DC gearmotors 1/7 hp and smaller. Package includes one set of 2 brushes and 2 brush caps.	MTGx-P06-1Jxxx, MTGx-P07-1Jxxx
<u>MTPM-BRUSH-6</u>	\$33.00	DC motor brushes, replacement, for 1/7 hp 90VDC or 180VDC MTGR and MTGP series DC gearmotors. Package includes one set of 2 brushes and 2 brush caps.	MTGx-P14-1Lxxx
<u>MTPM-BRUSH-7</u>	\$27.00	DC motor brushes, replacement, for 90VDC or 180VDC MTGR and MTGP series DC gearmotors 1/15 hp and smaller. Package includes one set of 2 brushes and 2 brush caps.	MTGx-P06-1Lxxx, MTGx-P05-1Lxxx
<u>MTGA-KIT-1</u>	\$51.00	DC motor spare parts kit, for certain MTGP and all MTGR series DC gearmotors as shown in dimension drawings P-B, R-A, & R-B. Includes: two metal brush cap covers, one terminal box, one 1/8 (0.125) inch shaft key and one 3/16 (0.187) inch shaft key.	MTGP-P14-1xxxx, MTGP-P20-1xxxx, MTGR-Pxx-1xxxx

* These replacement parts also fit many AutomationDirect small-frame DC motors. Refer to the DC Motors section for small-frame motor application information.

IronHorse® DC Gearmotors

MTGP Parallel Shaft Gearmotors – 1/17 hp – 1/5 hp



Selection and Specifications

Gearmotor Specifications – MTGP Series Parallel Shaft Gearmotors													
Part Number	Price	Voltage (VDC)	Motor HP	Speed (rpm)	Gear Ratio	F/L Torque (in-lb)	F/L Current (A) *	Shaft Dia (in)	Overhung Load (lb)	Axial/Thrust Load (lb)	Weight (lb)	Gearbox Features	Dimension Drawing #
MTGP-P06-1J008	\$236.00	12	1/16	7.9	386:1	50	1.39	0.3125	50	None (not suitable for applications with axial/thrust loading)	4.0	<ul style="list-style-type: none"> • Grease lubrication ** • Sleeve bearings • 18-inch wiring leads • Face mounted 	P-A
MTGP-P06-1J024	\$254.00			24	120:1	50	2.41						
MTGP-P06-1J034	\$258.00			34	83:1	45	2.86						
MTGP-P06-1J050	\$236.00			50	55:1	45	3.88						
MTGP-P06-1J097	\$237.00			97	26:1	36	5.68						
MTGP-P06-1L008	\$253.00	90	1/17	8.4	386:1	50	0.19	0.3125	50	None (not suitable for applications with axial/thrust loading)	4.0	<ul style="list-style-type: none"> • Grease lubrication ** • Sleeve bearings • 18-inch wiring leads • Face mounted 	P-A
MTGP-P06-1L012	\$254.00			12	269:1	50	0.23						
MTGP-P06-1L037	\$254.00			37	83:1	45	0.40						
MTGP-P06-1L055	\$236.00			55	55:1	45	0.54						
MTGP-P06-1L114	\$249.00			114	26:1	26	0.61						
MTGP-P14-1L026	\$415.00	90	1/7	26	69:1	280	1.58	0.625	150	200	11.4	<ul style="list-style-type: none"> • Oil lubrication ** • Needle bearings • Junction box with 8-inch wiring leads • Face mounted or foot mounted • Designed to AGMA standards 	P-B
MTGP-P14-1L039	\$415.00			39	46:1	189	1.59						
MTGP-P14-1L061	\$403.00			61	30:1	130	1.59						
MTGP-P14-1L091	\$403.00			91	20:1	86	1.58						
MTGP-P14-1L165	\$403.00			165	11:1	47	1.57						
MTGP-P20-1J026	\$426.00	12	1/5	26	69:1	280	12.60	0.625	150	200	11.4	<ul style="list-style-type: none"> • Oil lubrication ** • Needle bearings • Junction box with 8-inch wiring leads • Face mounted or foot mounted • Designed to AGMA standards 	P-B
MTGP-P20-1J037	\$426.00			37	46:1	245	15.80						
MTGP-P20-1J056	\$417.00			56	30:1	168	15.70						
MTGP-P20-1J084	\$417.00			84	20:1	112	15.70						
MTGP-P20-1J154	\$391.00			154	11:1	61	15.60						
MTGP-P20-1K018	\$417.00	24	1/5	18	110:1	280	4.41	0.625	150	200	11.4	<ul style="list-style-type: none"> • Oil lubrication ** • Needle bearings • Junction box with 8-inch wiring leads • Face mounted or foot mounted • Designed to AGMA standards 	P-B
MTGP-P20-1K036	\$417.00			36	46:1	245	7.89						
MTGP-P20-1K084	\$412.00			84	20:1	112	7.87						
MTGP-P20-1K153	\$412.00			153	11:1	61	7.81						

* Current must be limited so that it does not exceed 125% of the gearmotor rated current.

** Permanently lubricated.

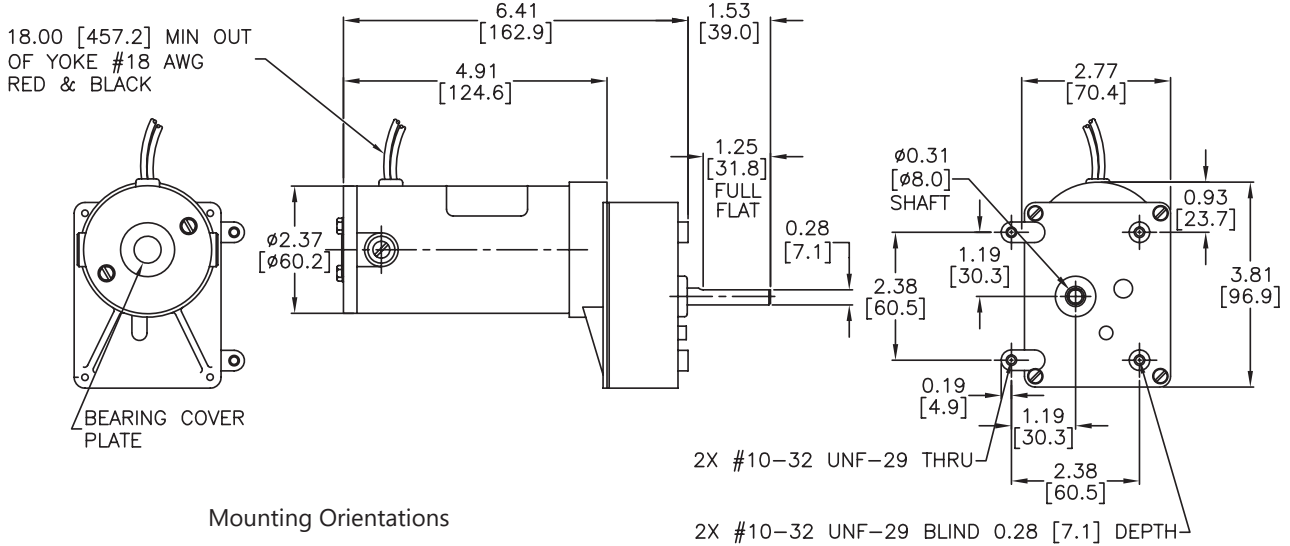
Replacement parts are available, as shown in "Replacement Parts for MTGP and MTGR DC Gearmotors" subsection.

IronHorse® DC Gearmotors

MTGP Parallel Shaft Gearmotors – 1/17 hp – 1/5 hp

Dimensions (in [mm])

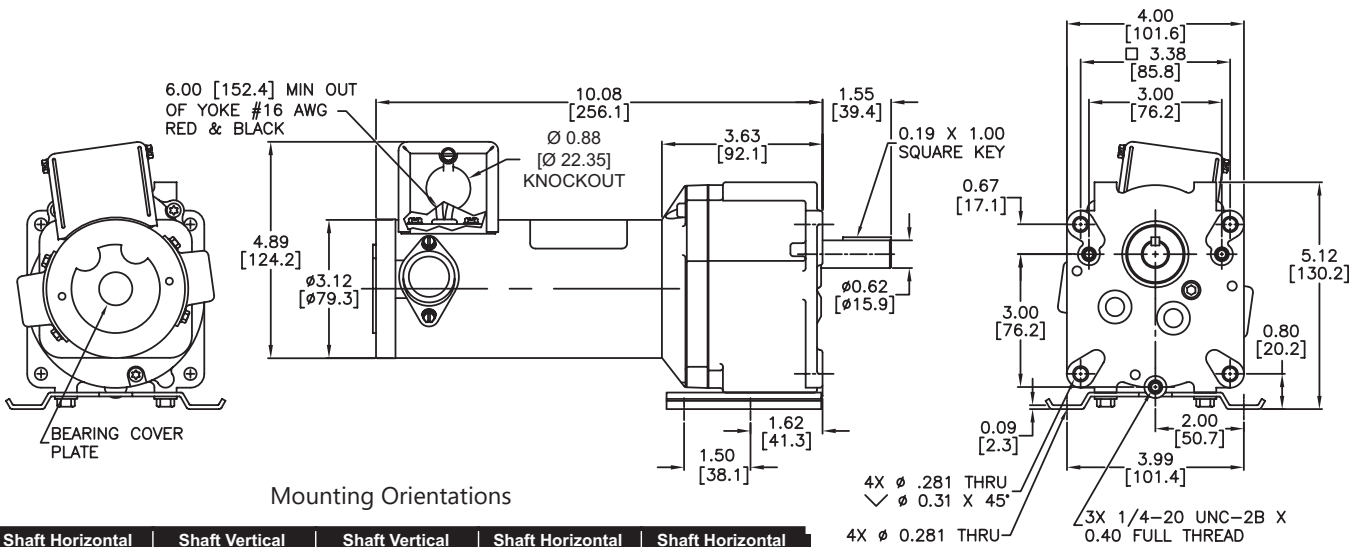
Dimension Drawing # P-A



Mounting Orientations

Shaft Horizontal Rightside Up	Shaft Vertical Down	Shaft Vertical Up	Shaft Horizontal Upside Down	Shaft Horizontal Base Rolled 90°

Dimension Drawing # P-B

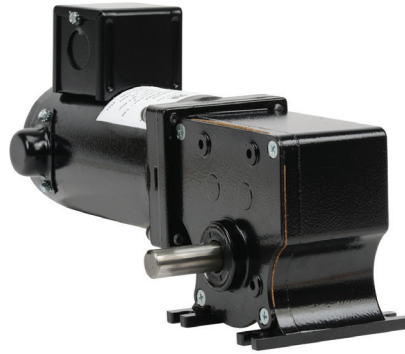


Mounting Orientations

Shaft Horizontal Rightside Up	Shaft Vertical Down	Shaft Vertical Up	Shaft Horizontal Upside Down	Shaft Horizontal Base Rolled 90°

IronHorse® DC Gearmotors

MTGR Right Angle Gearmotors – 1/19 hp – 1/5 hp



Selection and Specifications

Gearmotor Specifications – MTGR Series Right-Angle Shaft Gearmotors													
Part Number	Price	Voltage (VDC)	Motor HP	Speed (rpm)	Gear Ratio	F/L Torque (in-lb)	F/L Current (A) *	Shaft	Overhung Load (lb)	Axial/Thrust Load (lb)	Weight (lb)	Gearbox Features	Dimension Drawing #
MTGR-P05-1L038	\$412.00	90	1/19	38	50:1	42	0.68	dual shaft 0.5 in diameter	200	150	8.3	<ul style="list-style-type: none"> • Grease lubrication ** • Ball bearings • Junction box with 8-inch wiring leads • Face or Foot mounted • Single worm 	R-A
MTGR-P05-1L053	\$412.00			53	36:1	33	0.68						
MTGR-P05-1L093	\$412.00			93	20.5:1	23	0.68						
MTGR-P05-1L132	\$412.00			132	14.5:1	17	0.67						
MTGR-P05-1L197	\$412.00			197	9.75:1	12	0.68						
MTGR-P07-1J036	\$385.00	12	1/15	36	50:1	50	5.69	dual shaft 0.5 in diameter	200	150	8.3	<ul style="list-style-type: none"> • Grease lubrication ** • Ball bearings • Junction box with 8-inch wiring leads • Face or Foot mounted • Single worm 	R-A
MTGR-P07-1J084	\$385.00			84	20.5:1	34	6.78						
MTGR-P07-1J177	\$386.00			177	9.75:1	18	6.78						
MTGR-P14-1L022	\$441.00	90	1/7	22	82:1	280	1.41	single shaft 0.625 in diameter	150	200	14.4	<ul style="list-style-type: none"> • Double shielded ball bearings • Junction box with 8-inch wiring leads • Foot mounted • Bevel gears • 80 – 90% efficient • Can be backdriven *** 	R-B
MTGR-P14-1L040	\$443.00			40	44:1	185	1.64						
MTGR-P14-1L064	\$474.00			64	28:1	116	1.65						
MTGR-P14-1L077	\$462.00			77	23:1	97	1.65						
MTGR-P14-1L178	\$441.00			178	10:1	44	1.64						
MTGR-P20-1K023	\$451.00	24	1/5	23	82:1	280	5.64	single shaft 0.625 in diameter	150	200	14.4	<ul style="list-style-type: none"> • Double shielded ball bearings • Junction box with 8-inch wiring leads • Foot mounted • Bevel gears • 80 – 90% efficient • Can be backdriven *** 	R-B
MTGR-P20-1K039	\$446.00			39	44:1	263	8.74						
MTGR-P20-1K075	\$451.00			75	23:1	137	8.72						
MTGR-P20-1K174	\$451.00			174	10:1	63	8.75						

* Current must be limited so that it does not exceed 125% of the gearmotor rated current.

** Permanently lubricated.

*** Not intended for DC power generation.

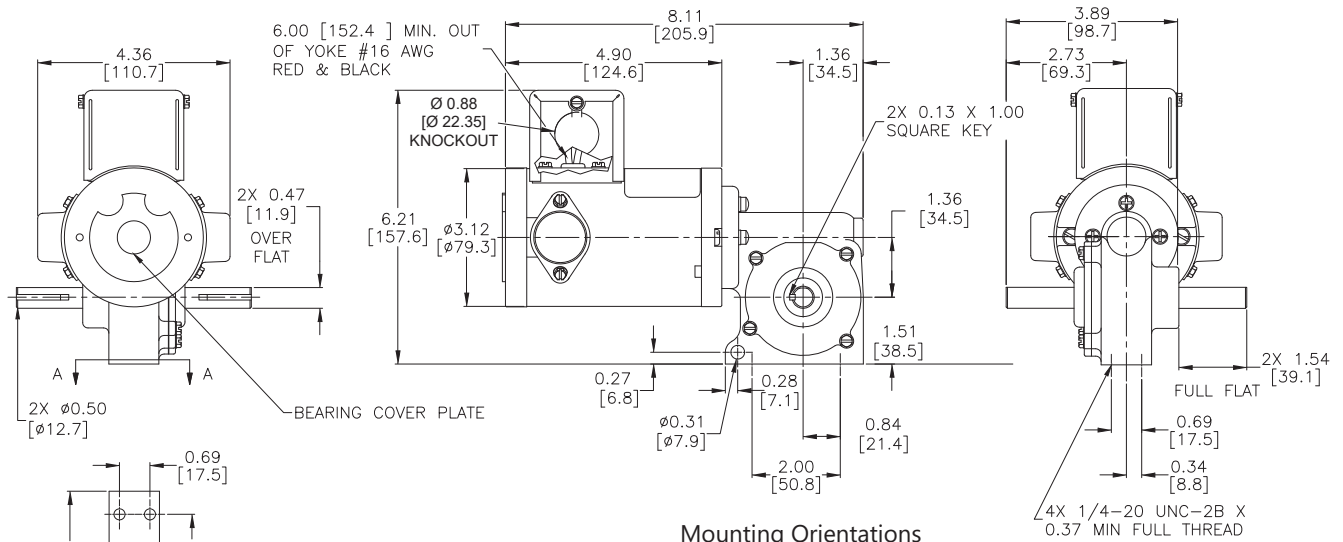
Replacement parts are available, as shown in “Replacement Parts for MTGP and MTGR DC Gearmotors” subsection.

IronHorse® DC Gearmotors

MTGR Right Angle Gearmotors – 1/19 hp – 1/5 hp

Dimensions (in [mm])

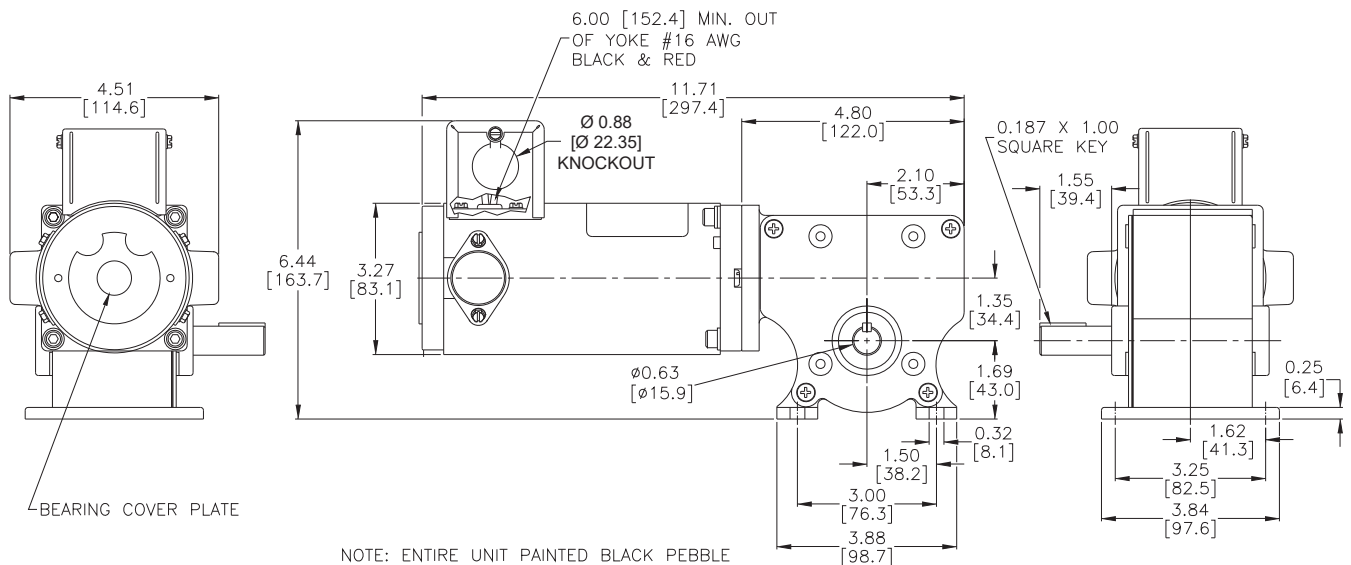
Dimension Drawing # R-A



Mounting Orientations

Shaft Horizontal Rightside Up	Shaft Vertical Up/Down Motor Horizontal	Shaft Horizontal Motor Vertical & Above	Shaft Horizontal Motor Vertical & Below	Shaft Horizontal Upside Down

Dimension Drawing # R-B



NOTE: ENTIRE UNIT PAINTED BLACK PEBBLE

The Only Acceptable Orientation is Shown in the Above Illustration

AutomationDirect AC Motors Selection Overview

EPAct, High and Premium Efficiency What does it all mean?

EPAct (1992)

In 1992, the U.S. Congress passed legislation requiring that general purpose Design A & B motors meet minimum efficiency requirements, and this legislation was called the Energy Policy Act of 1992. Previously, there had been no U.S. standards set forth for motor energy efficiency. Since 1997 (when EPAct '92 was first enforced), two-, four-, and six-pole general purpose Design A & B motors had to meet EPAct guidelines. Since then, most general purpose motors manufactured and/or sold in the U.S. have met these requirements.

Premium Efficiency (EISA 2007)

In December 2010, a new level of energy efficiency mandate went into effect. The Energy Independence and Security Act of 2007 mandated that all AC industrial motors as described below must meet Premium Efficiency standards. The NEMA trade group was instrumental in getting this legislation passed, so many people refer to the high efficiency motors by their nickname – NEMA Premium®. All applicable motors manufactured or imported into the U.S. after December 2010 must meet the Premium Efficiency guidelines.

Motors Covered Under EISA 2007 (Premium Efficiency Mandate)	
Included – must meet the new Premium Efficiency standards – Industrial AC electric squirrel-cage general-purpose motors as follows:	
Single speed; Polyphase; 1–200 hp with 3-digit frame sizes; 2, 4, & 6 pole (3600, 1800, & 1200 rpm); NEMA design A & B (including IEC equivalent); Continuous rated	
Not Included in Premium Efficiency standards, but must now meet EPAct standards:	
JM; JP; Round body (footless); 201–500 hp; Fire pump; U-frame; Design C; 8-pole	

Certain motors (Inverter/Vector Duty, NEMA design D, etc.) are not covered by EISA 2007.
For full text, visit www.energy.senate.gov and click “ENERGY INDEPENDENCE & SECURITY ACT OF 2007”.

Nominal Full-Load Efficiency Standards Comparisons (%)						
Enclosed Electric Motors, Random Wound, 60 Hz, 600V or Less						
Motor HP	1200 rpm [6-pole]		1800 rpm [4-pole]		3600 rpm [2-pole]	
	EPAct	Premium Efficiency	EPAct	Premium Efficiency	EPAct	Premium Efficiency
1	80.0	82.5	82.5	85.5	75.5	77.0
1.5	85.5	87.5	84.0	86.5	82.5	84.0
2	86.5	88.5	84.0	86.5	84.0	85.5
3	87.5	89.5	87.5	89.5	85.5	86.5
5	87.5	89.5	87.5	89.5	87.5	88.5
7.5	89.5	91.0	89.5	91.7	88.5	89.5
10	89.5	91.0	89.5	91.7	89.5	90.2
15	90.2	91.7	91.0	92.4	90.2	91.0
20	90.2	91.7	91.0	93.0	90.2	91.0
25	91.7	93.0	92.4	93.6	91.0	91.7
30	91.7	93.0	92.4	93.6	91.0	91.7
40	93.0	94.1	93.0	94.1	91.7	92.4
50	93.0	94.1	93.0	94.5	92.4	93.0
60	93.6	94.5	93.6	95.0	93.0	93.6
75	93.6	94.5	94.1	95.4	93.0	93.6
100	94.1	95.0	94.5	95.4	93.6	94.1
125	94.1	95.0	94.5	95.4	94.5	95.0
150	95.0	95.8	95.0	95.8	94.5	95.0
200	95.0	95.8	95.0	96.2	95.0	95.4

AutomationDirect AC Motors Selection Overview

General-purpose or inverter-duty motor?

How to choose a general purpose motor vs. an inverter-duty motor

General purpose motors have been around for many years. They are the workhorse of almost every industry. As the use of VFDs (inverters or AC drives) has become commonplace in industry, the construction of general purpose motors was improved to handle many applications. All ADC General purpose 3 phase motors are inverter rated and can withstand the higher voltage spikes produced by all VFDs (amplified at longer cable lengths).

If an application requires precise speed control or high loads at lower speed, a high performance inverter duty motor may be required. These motors are designed run at very slow speeds without overheating. This performance comes at a cost: high performance inverter-duty motors can be much more expensive than general purpose inverter rated motors. Guidelines for choosing an IronHorse general purpose motor vs. a high performance inverter duty motor are given below. If your application falls within the guidelines below, there is no need to apply a high performance inverter-duty motor.

NOTE: Marathon high performance, inverter duty motors have limitations as well. Please see the Marathon section for more details.

Background: For many years, AC motors were driven by across-the-line contactors and starters. The electricity sent to the motor was a very clean sine wave at 60Hz. Noise and voltage peaks were relatively small. **However, there were drawbacks:** they only ran electrically at one speed (speed reduction was usually handled by gearboxes or some other, usually inefficient, mechanical means) and they had an inrush of electrical current (when the motor was first turned on) that was usually 5 to 6 times the normal current that the motor would consume. The speed reduction apparatus was expensive and bulky, and the inrush would wreak havoc with power systems and loading (imagine an air conditioning system in an old house - when the compressor would kick on, the lights would dim; now imagine the same circumstances with a motor the size of a small car).

Note: The following discussion applies only to 3-phase motors.

Enter the VFDs (variable frequency drives): Drives were introduced to allow the speed of these motors to be changed while running and to lessen the inrush current when the drive first starts up. To do this, the drive takes the incoming 60Hz AC power and rectifies it to a DC voltage (every drive has a DC bus that is around 1.414 (sqrt of 2) * incoming AC Line Voltage).

This DC voltage is then "chopped" by power transistors at very high frequencies to simulate a sine wave that is sent to the motor [see Figure 1]. By converting the incoming power to DC and then reconvertng it to AC, the drive can vary its output voltage and output frequency, thus varying the speed of a motor. Everything sounds great, right? We get to control the frequency and voltage going out to the motor, thus controlling its speed.

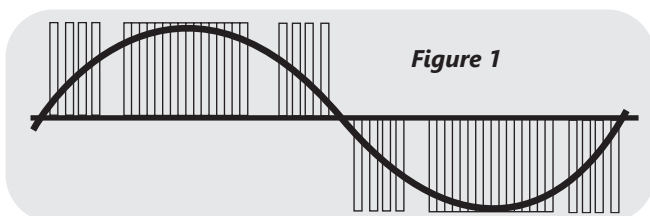


Figure 1

Some things to watch out for: A VFD-driven general purpose motor can overheat if it is run too slowly. (Motors can get hot if they're run slower than their rated speed.) Since most general purpose motors cool themselves with shaft-mounted fans, if the motor overheats, bearing and insulation life will be reduced. Therefore there are minimum speed requirements for all motors.

The voltage "chopping" that occurs in the drive actually sends high-voltage spikes (at the DC bus level) down the wire to the motor. If the system contains long cabling, there are actually instances where a reflected wave occurs at the motor.

The reflected wave can effectively double the voltage on the wire. This can lead to premature failure of the motor insulation. Long cable lengths between the motor and drive increase the harmful effects of the reflected wave, as do high chopping frequencies (listed in drive manuals as carrier frequencies). Line reactors, 1:1 transformers placed at the output of the drive, can help reduce the voltage spikes going from the drive to the motor. Line reactors are used in many instances when the motor is located far from the drive [see Figure 2].

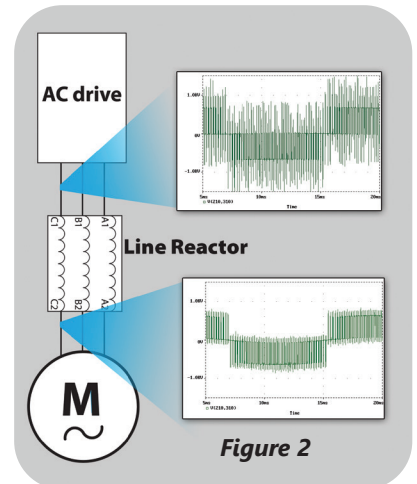


Figure 2

In summary, all ADC general purpose motors are inverter rated and can be run with drives in many applications; however high performance, inverter-duty motors are designed to handle much lower speeds without overheating and they are capable of withstanding higher voltage spikes without their insulation failing. With the increased performance comes an increase in cost. This additional cost can be worth it if you need greater performance.

The considerations for applying IronHorse motors are given below.

Heat considerations

	IronHorse speed ratio	For an 1800 RPM motor, minimum IronHorse speed is:
Variable Torque applications (fans, centrifugal pumps, etc.)	5:1 (EPAct motors) 10:1 (PE motors)	1800/5 = 360RPM 1800/5 = 180RPM
Constant Torque Applications (conveyors, extruders, etc.)	2:1 (EPAct motors) 4:1 (PE motors)	1800/2 = 900RPM 1800/4 = 450RPM

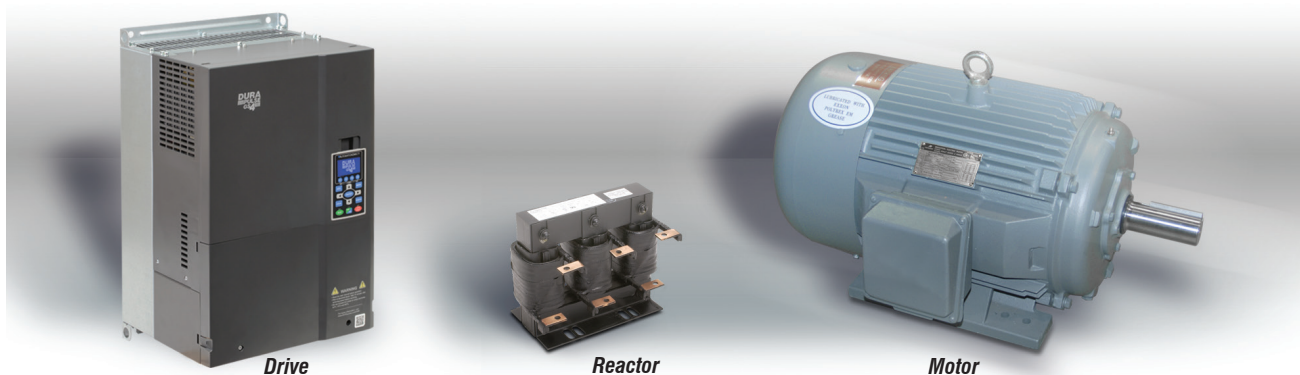
Voltage Spike considerations

	Max cable distance from drive to IronHorse motor	Max cable distance with a 3% line reactor between drive and IronHorse motor
For use with 230V and 460V VFDs*	125 ft	250 ft

* Up to 6kHz carrier frequency

IronHorse[®] General-Purpose AC Motors

Using IronHorse General-Purpose Motors with AC Drives



Drive

Reactor

Motor

AC drive motor control vs. across-the-line motor control

General purpose AC induction motors are typically controlled by across-the-line starters, i.e. contactors, manual motor starters, etc. However, 3-phase general purpose motors can also be controlled by AC drives under certain conditions. (1-phase AC motors cannot be controlled by typical 3-phase AC drives.)

Across-the-line control applies full voltage to the motor at startup, and has several disadvantages.

- High inrush current - startup inrush current is typically 5-6 times the normal motor full load current, and can significantly increase utility bills.
- Inability to change speeds - the motor runs only at its rated speed.
- Inefficiency in some applications - fan and pump applications require ON/OFF control or valves/dampers to control flow.
- Contact maintenance - arcing caused by high inrush and breaking currents significantly reduce the motor starter's life span.

Many applications can use AC drive control for 3-phase AC induction motors, which has several advantages:

- Lower inrush current at motor startup
- Ability to change motor speed
- Greater efficiency in some applications. - fan and pump applications can use the AC drive to provide both motor control and flow control. The drive can control the flow by varying the motor speed, and therefore eliminate the need for inefficient valves/dampers.
- Solid state power delivery; minimal maintenance.

NOTE: AC drive (VFD) control is applicable only for 3-phase AC motors (3-phase AC drives cannot be used to control 1-phase motors)

General purpose AC induction motors are not designed specifically for use with AC drives, so there are three major considerations for AC drive control of 3-phase general purpose motors:

1. Heat considerations for AC drive control

Fan-cooled motors are designed to provide sufficient insulation cooling when the motors run at rated speed. The cooling ability of fans is reduced when motors run at lower speeds, and the insulation in general purpose motors is not designed for this condition. Therefore, there are limitations on how slowly general purpose motors can be continuously run without prematurely causing motor insulation failure.

• Constant Torque (CT) Applications

PE motors: 4:1 (1/4 rated speed)

EPAct motors: 2:1 (1/2 rated speed)

The CT minimum continuous speed for an IronHorse general purpose motor is either one quarter or one half of its rated speed, as shown in the motor Performance Data tables. (Constant torque loads require the same amount of torque from the motor regardless of speed; e.g., conveyors, cranes, machine tools.)

• Variable Torque (VT) Applications

PE motors: 10:1 (1/10 rated speed)

EPAct motors: 5:1 (1/5 rated speed)

The VT minimum continuous speed for an IronHorse general purpose motor is either one tenth or one fifth of its rated speed, as shown in the motor Performance Data tables. (Variable torque loads require less torque at lower speeds, resulting in less heat generated by the motor; e.g., fans, centrifugal pumps.)

If your application requires motors to run at speeds below those described above, use our Marathon inverter duty motors. Inverter duty motors can run fully loaded at very low speeds without being damaged by overheating.

2. Voltage spike considerations for AC drive control

All AC drives cause large voltage spikes between the drive and the motor, and long cable distances increase these spikes even more. Therefore, there are maximum cable lengths that can be run between the drive and the motor. Line (load) reactors can be installed near the drive output to reduce the voltage spikes.

- 230V and 460V **Without Reactor** – 125 ft maximum cable length between drive and motor

- 230V and 460V **With Reactor** – 250 ft maximum cable length between drive and motor

If your application requires cable lengths longer than those described above, please use our Marathon high performance, inverter-duty motors.

3. Carrier frequency limitation for AC drive control

The AC Drive carrier frequency should be set to 6kHz or less.



AC Motor Selection – IronHorse[®] General Purpose Motors

IronHorse[®] 1-Phase Motor Selection			
<i>Motor Series</i>	<i>MTR2</i>	<i>MTRJ</i>	<i>MTF2</i>
<i>Paint Color</i>	Black	Black	Green
<i>Main Characteristics</i>	General Purpose Rolled Steel	Jet Pump	Farm Duty Rolled Steel
Electrical Characteristics			
Horsepower range	1/3 - 2	1/3 - 2	2 - 10
Base speed	1800; 3600	3600	1800
Standard Voltage	115/208–230 VAC; 115/230 VAC	115/230 VAC	208–230 VAC
Phase / Base Frequency	1-phase / 60 Hz		
Service Factor	1.15		
Design Code (NEMA)	L or N (by model)	L or N (by model)	L
Insulation Class	Class F		
Insulation System	Dip and Bake Twice		Double VPI
Duty Cycle	Continuous		
Thermal protection	None	Automatic	Manual
Hazard Classification	None		
Mechanical Characteristics			
Frame size	56C or HC	56J	182T - 215T
Enclosure	TEFC	TEFC	TEFC
Enclosure Rating	IP43		IP55
Frame material	Rolled Steel		
End bracket material	Aluminum		
Junction box material	Steel		
Fan guard material	Steel		
Fan material	Polypropylene Plastic	Plastic	
Lead termination	Junction Box		
Standard mounting	C-Face with Removable Rigid Base		Rigid Base
Drive end shaft slinger	Yes		V-ring seal
Bearings	Ball		
Grease	Mobil Polyrex EM		NS7 ENS
Standard junction box assembly position	F1		
Performance Characteristics			
Constant Torque speed range	N/A		
Variable Torque speed range	N/A		
Constant Horsepower speed range	N/A		
Temperature rise	B		
Encoder provisions	None		
Other Characteristics			
Warranty*	2 Years		
Agency Approvals **	CSA, CE		CE, UR

* See Terms and Conditions for motor warranty explanation.

1) For warranty on IronHorse motors below 50hp, warranty service can be arranged through AutomationDirect.

2) For warranty on IronHorse motors 50hp and above, motors must be inspected by a local EASA motor repair or service center; (see AutomationDirect Terms & Conditions).

** To obtain the most current agency approval information, see the Agency Approval Checklist on the specific part number's web page.

*** 56HC motors are capable of 56C C-face mounting, and are also compatible with 56, 143T, and 145T foot mounting dimensions.



AC Motor Selection – IronHorse® General Purpose Motors

IronHorse® 3-Phase Motor Selection					
Motor Series	MTR2/MTRP	MTRJ/MTRJP	MTDP	MTSP/MTSN	MTCP2
Paint Color	Black	Black	Blue	Stainless	Gray
Main Characteristics	General Purpose Rolled Steel	Jet Pump	Rolled Steel Open Drip Proof	Stainless Steel Premium Efficiency IP69K	Cast-Iron Hazardous Duty
Electrical Characteristics					
Horsepower range	1/3 - 3	1/3 - 3	1 - 50	1 - 20	1 - 300(T) 1 - 30(TC)
Base speed	1800; 3600	3600	1800; 3600	1200; 1800; 3600	1200; 1800; 3600
Standard Voltage	208-230/460 VAC; 230/460 VAC	208-230/460 VAC; 230/460 VAC	208-230/460 VAC	208-230/460 VAC	208-230/460 VAC; 460VAC
Phase / Base Frequency (Hz)	3-phase / 60 Hz				
Service Factor	1.15	1.15	1.15 (sine), 1.0 (drive)		1.25 (1-200) 1.15 (250-300) 1.0 (all w/ drive)
Design Code (NEMA)	B				
Insulation Class	Class F				
Insulation System	Dip and Bake	Dip and Bake Twice	VPI	Dip and Bake	Vacuum Impregnation
Duty Cycle	Continuous				
Thermal protection	None				
Hazard Classification	None			Class 1 / Div 2	
Mechanical Characteristics					
Frame size	56C or HC - 326T	56J	56C - 326T	56C - 256TC	143T/TC - 449T
Enclosure	ODP / TEFC	TEFC	ODP / TEFC	TEFC / TENV	TEFC
Enclosure Rating	IP43		IP23	IP69K	IP55
Frame material	Rolled steel		Rolled steel	304 Stainless steel	Cast iron
End bracket material	Aluminum	Aluminum	≤256 frame- Aluminum >256- Cast iron	304 Stainless steel	Cast iron
Junction box material	Steel	Steel	Steel	304 Stainless steel	Cast iron
Fan guard material	Steel	Steel	N/a	304 Stainless steel	Steel
Fan material	Polypropylene plastic	Plastic	N/a	Heat-Resistant Polyethylene	Plastic
Lead termination	Junction Box				
standard mounting	C-face with removable rigid base		Rigid base	C-face round body and C-face with rigid base	Rigid base, c-face with rigid base (1-100 hp)
Drive end shaft slinger	Yes	Yes	None	Yes	Yes
Bearings	Ball				1-300 hp - 2p, 1-75 hp - 4p & 6p: Ball 100-300 hp - 4p & 6p: Roller
Grease	Mobil Polyrex EM		NS7 ENS	Mobil Polyrex EM	
Standard junction box assembly position	F1				F1 (field convertible F2)
Performance Characteristics					
Constant Torque speed range	4:1	4:1	10:1	10:1	10:1
Variable Torque speed range	10:1	10:1	20:1	20:1	20:1
Constant Horsepower speed range	1.5:1	1.5:1	1.5:1	1.5:1	1.5:1
Temperature rise	B				
Encoder provisions	None				
Other Characteristics					
Warranty*	2 years	2 years	2 years	1 year	2 years
Agency Approvals **	CSA, CE	CSA,CE	CSA	NEMA, CSA, UR, CE, BISCC	CSA, ISO9001, CE

* See Terms and Conditions for motor warranty explanation.

1) For warranty on IronHorse motors below 50hp, warranty service can be arranged through AutomationDirect.

2) For warranty on IronHorse motors 50hp and above, motors must be inspected by a local EASA motor repair or service center; (see AutomationDirect Terms & Conditions).

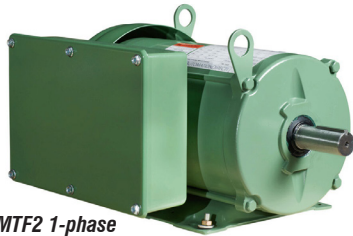
** To obtain the most current agency approval information, see the Agency Approval Checklist on the specific part number's web page.

*** 56HC motors are capable of 56C C-face mounting, and are also compatible with 56, 143T, and 145T foot mounting dimensions.


IRONHORSE®

Model Overview

IronHorse motors are manufactured by leading motor suppliers with over 20 years experience delivering high-quality motors to the demanding U.S. market. Our suppliers produce motors in ISO9001 facilities, and test the motors during production and after final assembly. This is how we can stand behind our IronHorse motors with a two-year warranty (one year for Stainless Steel).



**MTF2 1-phase
Farm Duty T-Frame**



**MTR2 / MTRJ 1-phase General Purpose
or Jet Pump Rolled Steel 56C Frame**



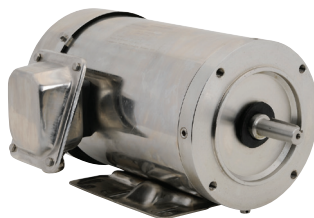
**MTR2 / MTRP / MTRJ 3-phase General
Purpose or Jet Pump Rolled Steel 56C Frame**



**MTDP 3-phase Premium Efficiency
Rolled Steel Open Drip-Proof**



**MTSP / MTSN 3-phase Stainless Steel
56C - Rigid Base or Round Body**



**MTSS 3-phase Stainless Steel
56C - Rigid Base or Round Body**



**MTCP2 3-phase Premium
Efficiency Cast-iron TC & T Frame**

The IronHorse® line of motors includes:

1 - Phase

- **MTR2 Series:** TEFC 56(H)C-frame AC motors with rolled-steel frames; flange mount and removable mounting feet; 0.33–2 hp
- **MTF2 Series:** TEFC T-frame Farm-Duty AC motors with rolled-steel frames and mounting feet; 2–10 hp
- **MTRJ Series:** TEFC 56J frame. Jet Pump AC Motors. Flange mount and removable mounting feet. 1/3hp - 2hp

3 - Phase

- **MTR2 Series:** TEFC 56C-frame AC motors with rolled-steel frames; flange mount and removable mounting feet; 0.33–0.75 hp
- **MTRP Series:** TEFC 56C/HC-frame AC motors with rolled-steel frames; removable base and C-face mount; 1–3 hp
- **MTRJ Series:** TEFC 56J frame. Jet Pump AC Motors. Flange mount and removable mounting feet. 1/3hp - 3hp
- **MTSS Series:** TEFC 56C-frame AC motors with stainless-steel frames; IP56; flange mount and round bodies or rigid mounting feet; 0.33–0.75 hp
- **MTSP/MTSN Series:** TEFC/TENV 56C-284t frame AC motors with stainless steel frames; IP69K; flange mount and round bodies or flange mount with rigid mounting feet; 0.33–20 hp
- **MTCP2 Series:** TEFC T-frame Premium Efficiency AC motors with cast-iron frames and mounting feet; 1–300 hp (TC-frame [C-face] 1–30 hp)
- **MTDP Series:** Open Drip-Proof Premium Efficiency AC motors with rigid base mount; motor rating range - 1 to 50 hp.
- Replacement switches, junction boxes, and start and run capacitors available for IronHorse 1-phase motors
- Replacement bases, fans, and fan shrouds available for many IronHorse motors
- Accessory C-flange kits available for flange mounting of IronHorse 3-phase cast-iron and rolled steel T-frame Premium Efficiency motors
- STABLE motor slide bases for adjustable mounting of NEMA motors from 56 to 449T (adjustable stainless steel bases not available)



MTF2 Series Farm-Duty AC Motors – 1-Phase

T-Frame TEFC Motors – 1-phase 2 to 10 hp

Features

- 208-230VAC 1-phase
- Totally Enclosed Fan Cooled (TEFC) enclosure
- IP55 environmental rating
- NEMA T-frame
- Rolled-steel housing
- Rigid mounting base
- Can be mounted in horizontal or vertical orientation
- Steel fan cover
- Class-10 manual-reset locked-rotor thermal protector (motor thermal overload must be provided separately)
- Large easy-to-wire junction box with rubber gasket
- Heavy duty oversized ball bearings
- High tensile strength steel shaft
- Mylar nameplate with easy-to-read wiring diagram
- Electrically reversible
- NEMA design L
- Class F winding insulation
- VPI (Vacuum and Pressure Impregnation) insulation process
- Service Factor: 1.15 @ 230VAC; 1.0 @ 208VAC
- Two year warranty
- cUR_{US} certified, CE

Accessories Available

- Start capacitors (replacement/spare)
- Run capacitors (replacement/spare)
- Centrifugal switches (replacement/spare)
- Stationary switches (replacement/spare)
- Locked rotor thermal overload switches (replacement/spare)
- Junction boxes (replacement/spare)
- Fans (replacement/spare)
- Fan shrouds (replacement/spare)
- C-face kits

Applications

- Conveyors
- Fans
- Pumps
- Air compressors
- Other farm equipment



Motor Specifications – 1-phase Farm-Duty Motors

Part Number	Price	HP	Base RPM	Voltage	Housing	NEMA Frame	Service Factor	F.L. Amps @ 208/230VAC	Approx Weight (lb)	Drawing Link
MTF2-002-1B18-182	\$600.00	2	1800	208-230 VAC	TEFC IP55	182T	1.15 @ 230 VAC, 1.0 @ 208 VAC	9.3 / 8.5	67	PDF
MTF2-003-1B18	\$692.00	3				184T		13.5 / 12.5	76	PDF
MTF2-005-1B18	\$926.00	5				184T		22.2 / 20.2	100	PDF
MTF2-7P5-1B18-215	\$1,311.00	7 1/2				215T		31.5 / 28.7	134	PDF
MTF2-010-1B18	\$1,449.00	10				215T		45.2 / 38.8	149	PDF

Notes:

- 1) Please review the AutomationDirect Terms & Conditions for warranty and service on this product.
- 2) Certain heavy and oversized items can be shipped only via LTL. Check our web site for current shipping method constraints by part number.
- 3) Operate on 230VAC +/- 10% (1.15 @ 230VAC; 1.0 S.F. @ 208V), 1-phase power only.

Performance Data – 1-phase Farm-Duty Motors

Part Number	HP	NEMA Design	FL RPM	Current @ 230V (Amps)			Torque (lb-ft)			FL Efficiency (%)	FL Power Factor	Rotor Inertia (lb-ft ²)
				230V No Load	Full Load	Locked Rotor	Full Load	Locked Rotor	Break-down			
MTF2-002-1B18-182	2	215T	1764	3.0	8.5	78.6	6.01	21.8	22.1	84.0	0.92	0.27
MTF2-003-1B18	3		1769	4.2	12.5	89.2	8.76	24.9	24.4	84.4	0.91	0.34
MTF2-005-1B18	5		1769	6.3	20.2	170.7	14.7	57.2	57.3	86.4	0.92	0.49
MTF2-7P5-1B18-215	7 1/2		1767	8.2	28.7	238.5	21.91	82.8	82.2	86.6	0.96	0.74
MTF2-010-1B18	10		1765	11.79	38.8	365.8	29.93	119.7	122.7	87.5	0.96	0.85



Farm-Duty AC Motor Accessories

T-Frame TEFC Motors – 1-phase 2 to 10 hp

Start Capacitors

1-phase motors use capacitors to provide starting torque when power is first applied to the motor. AutomationDirect offers *spare/replacement* starting capacitors for our 1-phase IronHorse motors.

Run Capacitors

In addition to the start capacitors and centrifugal switches, IronHorse 1-phase farm-duty motors also have run capacitors which allow the motors to develop higher running torque, greater efficiency, and improved power factor. We offer *spare/replacement* run capacitors for 1-phase IronHorse motors.

Centrifugal Switches

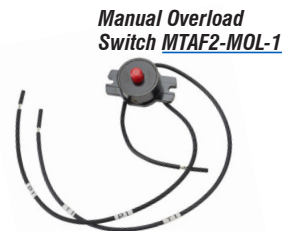
The start capacitors are no longer needed once the motors begin turning, so they are then taken out of the circuit by a centrifugal switch. We also offer *spare/replacement* switches for our motors.

Locked Rotor Overload Switches

IronHorse Farm Duty motors have a built-in manual overload switch to disable the motor if the load stops the motor (locked rotor). The overload is located in the motor's junction box, and has a manual reset switch. This switch is for locked rotor only. A separate motor thermal overload must be provided.



Centrifugal Switch
MTAF2-CSW-05



Manual Overload Switch
MTAF2-MOL-1



Start Capacitor
MTAF2-CAP-16



Run Capacitor
MTAF2-CAP-19



Stationary Switch
MTAF2-SSW-05

MTF Farm-Duty 1-phase Motor Spare/Replacement Parts *							
Part Number	Price	Accessory Type	Capacitance (µF)	Rated Voltage	Dimension Height x Ø (in [mm])	Applicable Motor Number	Motor HP
<u>MTAF2-CAP-16</u>	\$37.00	start capacitor	250	300	3.39 x 1.81 [86.1 x 46.0]	<u>MTF2-002-1B18-182</u> <u>MTF2-003-1B18</u>	2, 3
<u>MTAF2-CAP-17</u>	\$53.00		550		3.39 x 1.81 [86.1 x 46.0]	<u>MTF2-005-1B18</u>	5
<u>MTAF2-CAP-18</u>	\$118.00		400	330	4.33 x 1.97 [110.0 x 50.0]	<u>MTF2-7P5-1B18-215</u>	7.5
<u>MTAF2-CAP-19</u>	\$137.00		550	330	3.96 x 1.77 [100.6 x 45.0]	<u>MTF2-010-1B18</u>	10
<u>MTAF2-CAP-20</u>	\$30.50	run capacitor	25	450	3.96 x 1.97 [100.6 x 50.0]	<u>MTF2-002-1B18-182</u>	2
<u>MTAF2-CAP-21</u>	\$39.00		30	450	4.17 x 1.97 [106.0 x 50.0]	<u>MTF2-003-1B18</u>	3
<u>MTAF2-CAP-22</u>	\$47.00		50	450	3.54 x 2.01 [90.0 x 51.0]	<u>MTF2-005-1B18</u>	5
<u>MTAF2-CAP-23</u>	\$56.00		45	500	4.13 x 2.13 [105.0 x 54.0]	<u>MTF2-7P5-1B18-215</u>	7.5
<u>MTAF2-CAP-24</u>	\$60.00		60	500	4.72 x 1.97 [120.0 x 50.0]	<u>MTF2-010-1B18</u>	10
<u>MTAF2-CSW-05</u>	\$66.00	centrifugal switch	n/a	n/a	n/a	<u>MTF2-002-1B18-182</u> <u>MTF2-003-1B18</u> <u>MTF2-005-1B18</u>	2, 3, 5
<u>MTAF2-CSW-06</u>	\$82.00			250		<u>MTF2-7P5-1B18-215</u>	7.5, 10
<u>MTAF2-SSW-05</u>	\$156.00	stationary switch	n/a	n/a	n/a	<u>MTF2-002-1B18-182</u> <u>MTF2-003-1B18</u> <u>MTF2-005-1B18</u>	2, 3, 5
<u>MTAF2-SSW-06</u>	\$276.00					<u>MTF2-7P5-1B18-215</u> <u>MTF2-010-1B18</u>	7.5, 10
<u>MTAF2-MOL-1</u>	\$114.00	manual overload switch	n/a	n/a	n/a	<u>MTF2-002-1B18-182</u>	2
<u>MTAF2-MOL-2</u>	\$312.00					<u>MTF2-003-1B18</u>	3
<u>MTAF2-MOL-3</u>	\$309.00					<u>MTF2-005-1B18</u>	5
<u>MTAF2-MOL-4</u>	\$309.00					<u>MTF2-7P5-1B18-215</u>	7.5
<u>MTAF2-MOL-5</u>	\$309.00					<u>MTF2-010-1B18</u>	10

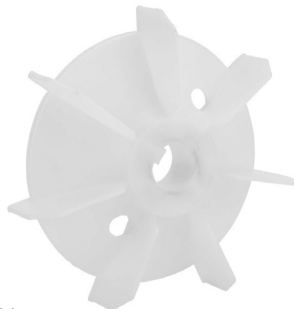
* These accessories are spare/replacement components only for IronHorse MTF2 series 1-phase farm-duty motors.



Farm-Duty AC Motor Accessories

T-Frame TEFC Motors – 1-phase 2 to 10 hp

Fans



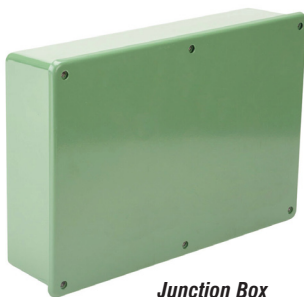
Fan
MTAF2-FAN-180

Fan Shrouds



Fan Shroud
MTAF2-SHROUD-180

Junction Boxes



Junction Box
MTAF2-JBOX-180

C-face Flanges



C-face Flange
MTAF2-CFACE-180TC

MTF2 Farm-Duty 1-phase Motor Spare/Replacement Parts *					
Part Number	Price	Accessory Type	Dimension Height x Ø (in [mm])	Applicable Motor Number	Motor HP
<u>MTAF2-CFACE-180TC</u>	\$126.00	c-face kit	n/a	<u>MTF2-002-1B18-182</u> <u>MTF2-003-1B18</u> <u>MTF2-005-1B18</u>	2, 3, 5
<u>MTAF2-CFACE-210TC</u>	\$230.00			<u>MTF2-7P5-1B18-215</u> <u>MTF2-010-1B18</u>	7.5, 10
<u>MTAF2-JBOX-180</u>	\$73.00	junction box		<u>MTF2-002-1B18-182</u> <u>MTF2-003-1B18</u> <u>MTF2-005-1B18</u>	2, 3, 5
<u>MTAF2-JBOX-210</u>	\$82.00			<u>MTF2-7P5-1B18-215</u> <u>MTF2-010-1B18</u>	7.5, 10
<u>MTAF2-FAN-180</u>	\$11.50	fan		<u>MTF2-002-1B18-182</u> <u>MTF2-003-1B18</u> <u>MTF2-005-1B18</u>	2, 3, 5
<u>MTAF2-FAN-210</u>	\$17.50			<u>MTF2-7P5-1B18-215</u> <u>MTF2-010-1B18</u>	7.5, 10
<u>MTAF2-SHROUD-180</u>	\$56.00	fan shroud		<u>MTF2-002-1B18-182</u> <u>MTF2-003-1B18</u> <u>MTF2-005-1B18</u>	2, 3, 5
<u>MTAF2-SHROUD-210</u>	\$66.00			<u>MTF2-7P5-1B18-215</u> <u>MTF2-010-1B18</u>	7.5, 10

* These accessories are spare/replacement components only for IronHorse MTF2 series 1-phase farm-duty motors.

Independently tested for quality at www.advancedenergy.org

Advanced Energy is North America's leading independent motor test lab and also the first motor lab to receive NVLAP (National Voluntary Laboratory Accreditation Program) compliance for motor efficiency testing through NIST. We commissioned them to put all IronHorse motors through rigorous mechanical and electrical tests to confirm our quality requirements. We were very satisfied with the results, and we're sure you will be too!

Rolled Steel 56C Frame Motors 0.33 to 3 hp

Large metal nameplate with easy-to-read wiring diagram

Standard NEMA 56C and 56HC frame

All sizes totally enclosed, fan cooled

starting at \$211.00

Electrically reversible

Large easy-to-wire junction box with rubber gasket

Heavy gauge industrial strength rolled steel frame and removable base

Heavy-duty oversized ball bearings and high-tensile strength steel shaft can start and carry large loads

IRONHORSE
AUTOMATIONDIRECT®

SA CE

1-phase - 115/208-230 Volt, 56C Frame - TEFC Enclosure, 1800 & 3600 RPM

- 0.33 to 2 hp
- Electrically reversible
- Capacitor start
- Removable bolt-on / bolt-off base
- Industrial gauge steel motor, frame and base

3-phase - 208-230/460 Volt, 56C Frame - TEFC Enclosure, 1800 & 3600 RPM

- 0.33 to 3 hp
- Electrically reversible
- Removable bolt-on / bolt-off base
- Industrial gauge steel motor, frame and base



MTR2 Series Rolled-Steel AC Motors – 1-Phase

56C/56HC Frame TEFC Motors – 1-phase 0.33 to 2 hp

Features

- Totally Enclosed Fan Cooled (TEFC) enclosure
- IP43 environmental rating
- NEMA 56C or 56HC flange mount (varies by model)
- Rolled steel shell frame / cast aluminum end bell
- Removable base / bolt-on/bolt-off mounting feet
- No mounting orientation restrictions
- Steel fan cover
- Large all-metal capacitor cover with rubber gasket and oversized capacitors
- Large easy-to-wire junction box with rubber gasket
- Heavy duty oversized ball bearings
- High tensile strength steel shaft
- Large Mylar nameplate with easy-to-read wiring diagram
- Electrically reversible
- NEMA design L or N (varies by model)
- Class F winding insulation
- Service Factor: 1.15
- Two year warranty
- CCSAUS certified, CE

Accessories Available

- Start capacitors (replacement/spare)
- Run capacitors (replacement/spare)
- Centrifugal switches (replacement/spare)
- Stationary switches (replacement/spare)
- Junction boxes (replacement/spare)
- Fans (replacement/spare)
- Fan shrouds (replacement/spare)
- Motor bases (replacement/spare)

Applications

- Conveyors
- Fans
- Gear reducers
- Pumps



MTR2 Series 1-phase motor (model without run capacitor shown)

Motor Specifications – 1-phase MTR2 Series

Part Number	Price	HP		Base RPM		1-phase Voltage		Housing	NEMA Frame	Service Factor		F.L. Amps		Approx Weight (lb)	Drawing Links
		60 Hz	50 Hz	60 Hz	50 Hz	60Hz	50Hz			60Hz	50Hz	115V/230V 60Hz	110/220V 50Hz		
MTR2-P33-1AB18	\$211.00	1/3	1/4	1800	1500	115/230	110/220	TEFC rolled steel frame with cast aluminum end bell	56C flange mount	1.15	1	5.2 / 2.6	5.4 / 2.7	22	PDF
MTR2-P50-1AB18	\$233.00	1/2	1/3									7.2 / 3.6	7.2 / 3.6	25	PDF
MTR2-P75-1AB18	\$253.00	3/4	1/2									10.0 / 5.0	9.6 / 4.8	29	PDF
MTR2-001-1AB18	\$259.00	1	3/4						13.0 / 6.5			12.4 / 6.2	36	PDF	
MTR2-1P5-1AB18	\$307.00	1-1/2	1						14.5 / 7.3			14.0 / 7.0	37	PDF	
MTR2-002-1AB18¹	\$356.00	2	1-1/2						19.6 / 9.8			23.4 / 11.7	44	PDF	
MTR2-P33-1AB36	\$211.00	1/3	1/4	3600	3000	115/230	110/220	TEFC rolled steel frame with cast aluminum end bell	56C	1.15	1	5.4 / 2.7	5.4 / 2.7	21	PDF
MTR2-P50-1AB36	\$219.00	1/2	1/3									6.5 / 3.3	6.4 / 3.2	23	PDF
MTR2-P75-1AB36	\$242.00	3/4	1/2									9.2 / 4.6	9.2 / 4.6	27	PDF
MTR2-001-1AB36	\$256.00	1	3/4		11.5 / 5.8			10.2 / 5.1	30			PDF			
MTR2-1P5-1AB36	\$281.00	1-1/2	1		13.0 / 6.5			11.4 / 5.7	31			PDF			
MTR2-002-1AB36	\$330.00	2	1-1/2		17.0 / 8.5			14.6 / 7.3	37			PDF			

Note: Please review the AutomationDirect Terms & Conditions for warranty and service on this product.
 1) If using this motor with 115V, a 30A feed service breaker will be required. The FLA will trip a standard 20A breaker.



MTR2 Series Rolled-Steel AC Motors – 1-Phase

56C/56HC Frame TEFC Motors – 1-phase 0.33 to 2 hp

Performance Data – 1-phase MTR2 Series (230V/60Hz data except as indicated)														
Part Number	HP		NEMA Design	F.L. RPM		Current @ 115V/230V (Amps)			Torque (lb-ft)			F.L. Efficiency (%)	F.L. Power Factor	Rotor Inertia (lb-ft ²)
	60 Hz	50 Hz		60 Hz	50 Hz	230V No Load	Full Load	Locked Rotor	Full Load	Locked Rotor	Break-down			
1800 RPM														
MTR2-P33-1AB18	1/3	1/4	N	1725	1425	2.05	5.2 / 2.6	33 / 16	1.01	3.54	2.57	63.0	0.58	0.048
MTR2-P50-1AB18	1/2	1/3				2.74	7.2 / 3.6	44 / 21	1.49	5.09	3.54	64.5	0.68	0.059
MTR2-P75-1AB18	3/4	1/2				3.14	10.0 / 5.0	62 / 30	2.26	7.06	5.16	67.0	0.71	0.074
MTR2-001-1AB18	1	3/4				4.39	13.0 / 6.5	80 / 40	3.03	9.30	8.23	70.0	0.69	0.095
MTR2-1P5-1AB18	1-1/2	1	L	1725	1425	5.23	14.5 / 7.3	110 / 55	4.46	8.70	10.45	77.0	0.84	0.095
MTR2-002-1AB18	2	1-1/2				8.07	19.6 / 9.8	152 / 76	6.06	12.17	13.81	79.0	0.82	0.121
3600 RPM														
MTR2-P33-1AB36	1/3	1/4	N	3450	2850	2.14	5.4 / 2.7	37 / 19	0.50	2.18	1.96	59.5	0.72	0.031
MTR2-P50-1AB36	1/2	1/3				2.23	6.5 / 3.3	47 / 23	0.74	2.59	2.42	63.0	0.74	0.034
MTR2-P75-1AB36	3/4	1/2				2.82	9.2 / 4.6	66 / 33	1.12	4.62	3.44	66.5	0.78	0.041
MTR2-001-1AB36	1	3/4				3.04	11.5 / 5.8	82 / 41	1.50	4.48	3.83	69.5	0.80	0.047
MTR2-1P5-1AB36	1-1/2	1	L	3450	2850	3.90	13.0 / 6.5	109 / 55	2.21	3.22	5.08	77.0	0.94	0.047
MTR2-002-1AB36	2	1-1/2				4.51	17.0 / 8.5	131 / 65	3.02	4.45	6.82	79.5	0.94	0.060



MTR, MTR2, MTRJ Series AC Motor Accessories – 1-Phase

56C/56HC Frame TEFC Motors – 1-phase – 0.33 to 2 hp – Motor Accessories

Start Capacitors

1-phase motors use capacitors to provide starting torque when power is first applied to the motor. AutomationDirect offers *spare/replacement* starting capacitors for our 1-phase IronHorse motors.

Run Capacitors

In addition to the start capacitors and centrifugal switches, IronHorse 1-1/2 and 2 hp 1-phase motors also have run capacitors which allow the motors to develop higher running torque, greater efficiency, and improved power factor. We offer *spare/replacement* run capacitors for 1-phase IronHorse motors.

Centrifugal Switches

The start capacitors are no longer needed once the motors begin turning, so they are then taken out of the circuit by a centrifugal switch. We also offer *spare/replacement* switches for our motors.

Stationary Switches

MTR2 series motors have a separate stationary switch that works with the centrifugal switch; both switches are required.

(MTR series motors have only the one centrifugal switch.)



Junction Box
MTAR-JBOX-56



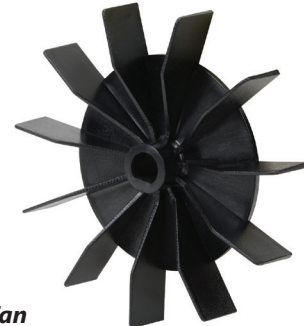
Junction Box
MTA2-JBOX-56



Start Capacitor
MTA-CAP-02 **Run Capacitor**
MTA-CAP-06



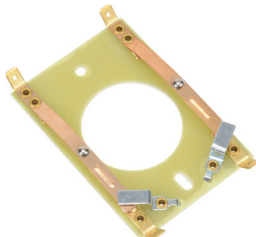
Fan
MTAR-FAN-56



Fan
MTA2-FAN-56



Centrifugal Switch **MTA-CSW-01**



Stationary Switch
MTA-CSW-04



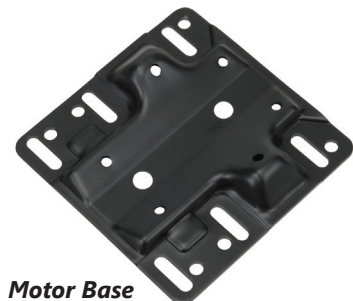
Fan Shroud
MTAR-SHROUD-56



Fan Shroud
MTA2-SHROUD-56



Motor Base
MTAR-BASE-56



Motor Base
MTA2-BASE-56



AC Motor Accessories – 1-Phase

56C/56HC Frame TEFC Motors – 1-phase – 0.33 to 2 hp – Motor Accessories

MTR Series 1-phase Motor Spare/Replacement Parts (NOT for MTR2 Motors)*							
Part Number	Price	Accessory Type	Capacitance (µF)	Rated Voltage	Dimension Height x Ø (in [mm])	Applicable MTR Motor Number	MTR Motor HP : RPM
MTA-CAP-01	\$12.50	start capacitor	200	165	3.15 x 1.65 [80.0 x 41.9]	MTR-P33-1AB18	1/3 : 1800
MTA-CAP-02	\$12.50	start capacitor	250			MTR-P50-1AB18	1/2 : 1800
MTA-CAP-03	\$12.50	start capacitor	300			MTR-P75-1AB18	3/4 : 1800
MTA-CAP-08	\$12.50	start capacitor	400			MTR-001-1AB18	1 : 1800
MTA-CAP-09	Retired	run capacitor	35		4.0 x 1.8 [101 x 45]	MTR-1P5-1AB36	1-1/2 : 3600
MTA-CSW-01	\$12.50	centrifugal switch	n/a	250	n/a	MTR-xxx-1AB18	all 1800 rpm
MTA-CSW-02	Retired					MTR-1P5-1AB36	all 3600 rpm
MTAR-BASE-56	\$14.50	motor base	n/a	n/a	n/a	MTR-xxx-1ABxx	all
MTAR-FAN-56	Retired	fan					
MTAR-JBOX-56	Retired	junction box					
MTAR-SHROUD-56	\$14.50	fan shroud					

* These accessories are spare/replacement components only for MTR series IronHorse motors. Accessories for MTR series motors are not compatible with MTR2 series motors.

MTR2 Series 1-phase Motor Spare/Replacement Parts (NOT for MTR Motors)*							
Part Number	Price	Accessory Type	Capacitance (µF)	Rated Voltage	Dimension Height x Ø (in [mm])	Applicable MTR2/MTRJ Motor Number	MTR2/MTRJ Motor HP : RPM
MTA-CAP-10	\$23.50	start capacitor	200	165	2.80 x 1.46 [71.1 x 37.1]	MTR2-P33-1AB36	1/3 : 3600
MTA-CAP-11	\$25.00	start capacitor	300			MTRJ-001-1AB36J	1 : 3600
MTA-CAP-12	\$26.50	start capacitor	400			MTR2-P33-1AB18	1/3 : 1800
MTA-CAP-13	\$38.00	start capacitor	500			MTR2-P50-1AB36	1/2 : 3600
MTA-CAP-14	\$38.00	run capacitor	40	250	3.38 x 1.85 [86.1 x 47.0]	MTRJ-1P5-1AB36J	1 1/2 : 3600
MTA-CAP-15	\$67.00	start capacitor	800	165	4.41 x 1.85 [112.0 x 47.0]	MTR2-002-1AB36	2 : 3600
MTA-CAP-22	\$72.00	start capacitor	900	165	4.375 x 1.8125 [111.1 x 46.0]	MTR2-1P5-1AB18	1-1/2 : 1800
MTA-CAP-31	\$21.00	start capacitor	150	165	3.39 x 1.85 [86.1 x 47.0]	MTR2-P50-1AB36	1/2 : 3600
MTA-CSW-03	\$19.00	centrifugal switch	n/a	125	n/a	MTRJ-P75-1AB36J	3/4 : 3600
MTA-CSW-04	\$19.00	stationary switch				MTR2-xxx-1AB36	all 3600 rpm
MTA-CSW-08	\$19.00	centrifugal switch				MTR2-xxx-1ABxx	all
MTA2-BASE-56	\$22.00	motor base				MTR2-xxx-1AB18	all 1800 rpm
MTA2-FAN-56	\$22.00	fan				MTR2-xxx-1ABxx	all
MTA2-JBOX-56	\$22.00	junction box				MTRJ-xxx-1ABxx	
MTA2-SHROUD-56	\$22.00	fan shroud					

* These accessories are spare/replacement components only for MTR2 series IronHorse motors. Accessories for MTR2 series motors are not compatible with MTR series motors.



MTR Centrifugal Jet Pump 1-phase TEFC Motors

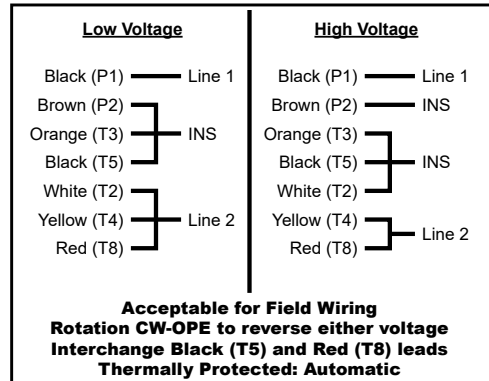
Features

- 1/3 - 2 HP
- 3600 RPM
- 115/208-230 volt
- Totally Enclosed Fan Cooled (TEFC) Enclosure
- 1.15 SF
- Class F insulation
- C-face with Removable Base
- Capacitor start / induction run (1/3 - 1 HP)
- Capacitor start / capacitor run (1.5 - 2 HP) for reduced amperage and high torque
- Vacuum Pressure Impregnation (VPI) System
- Anti-rust film applied to rotor
- Improved shaft seal on drive-end protects drive-end bearing from moisture and contaminants
- Automatic overload
- 56J - Threaded Shaft
- IP43 Protection

Applications

- Typical uses include: jet pumps and jet pump motor replacements.

Wiring Diagram



MTRJ-001-1AB36J

Motor Specifications – 1-phase											
Part Number	Price	HP*	Base RPM *	Volts*	Encl.	NEMA Frame	Service Factor*	F.L. Amps*	Sound Power (dB)	Weight (lb)	Drawing Links
Removable Rigid Base With C-face											
MTRJ-P33-1AB36J	\$188.00	1/3 (1/4)	3600 (3000)	115/230 VAC (110/220)	TEFC	56J	1.15 (1)	5.0/2.5 (4.4/2.2)	80 dB(A)	19.4	PDF
MTRJ-P50-1AB36J	\$195.00	1/2 (1/3)						6.6/ 3.3 (5.4/2.7)		21	PDF
MTRJ-P75-1AB36J	\$212.00	3/4 (1/2)						9.0 / 4.5 (8.0/4.0)		25.5	PDF
MTRJ-001-1AB36J	\$224.00	1 (3/4)						11.4/5.7 (10.4/5.2)	28.3	PDF	
MTRJ-1P5-1AB36J	\$270.00	1 1/2 (1)						13.0 / 6.5 (11.8/5.9)	30.7	PDF	
MTRJ-002-1AB36J	\$293.00	2 (1 1/2)						17.2 / 8.6 (14.8/7.4)	36.6	PDF	

*@ 60Hz (@ 50Hz)

Performance Data - 1-phase													
Part Number	HP*	F.L. RPM*	NEMA Design	F.L. Effic. %	Current			Torque			F.L. Power Factor	Moment of Inertia (lb-ft ²)	
					Full Load Amps	Locked Rotor Amps	No Load Current	Full Load (lb-ft)	Locked Rotor	Breakdown			Pull Up
Removable Rigid Base With C-face - 3600 RPM													
MTRJ-P33-1AB36J	1/3 (1/4)	3450 (2850)	N	55.0	5.0/2.5	19.51	2.64	0.51	145	250	95	85.00	0.02450
MTRJ-P50-1AB36J	1/2 (1/3)			59.5	6.6/ 3.3	25.22	3.19	0.76	130	265	90		0.02770
MTRJ-P75-1AB36J	3/4 (1/2)			66.0	9.0 / 4.5	47.22	4.95	1.12		220	100	81.00	0.03820
MTRJ-001-1AB36J	1 (3/4)			70.0	11.4/5.7	61.78	5.97	1.53	125	225	75	82.00	0.04580
MTRJ-1P5-1AB36J	1 1/2 (1)			78.5	13.0 / 6.5	82.74	8.34	2.25	115	220	110	94.00	0.04720
MTRJ-002-1AB36J	2 (1 1/2)			80.0	17.2 / 8.6	116.2	8.64	3.06	140	205	95	95.00	0.06020

*@ 60Hz (@ 50Hz)



MTDP Series Open Drip-Proof AC Motors – 3-Phase

T-Frame ODP Motors – 3-phase – 1 to 50hp



MTDP Series 3-Phase Motor

IronHorse® MTDP, open drip-proof motors range in size from 1hp to 50hp at 1800 rpm and 3hp, 5hp, and 7.5 hp at 3600 rpm. Frame sizes are available from 143T to 326T. All models have a rolled steel frame; frame sizes up to 256T have cast aluminum end bells, while frame sizes of 284T or larger have cast-iron end bells. All frame sizes have a fixed base.

Features

- Open drip-proof enclosure
- Rolled steel shell frame / cast aluminum or cast-iron end bells
- Large easy-to-wire junction box with rubber gasket
- No mounting orientation restrictions
- Heavy duty oversized ball bearings
- High tensile strength steel shaft
- Electrically reversible
- Inverter capable (3-phase only)
- NEMA design B
- Class F winding insulation
- Service Factor: 1.15 across-the-line (1.0 for 3-phase with AC drive)
- Two year warranty
- CURUS certified, CE

Accessories Available

- Junction boxes (replacement/spare)
- C-face kits
- Drive end endbell
- Opposite drive end endbell
- Current diverter rings (CDRs)

Applications

- Conveyors
- Fans
- Gear reducers
- Pumps



MTDP Open Drip-Proof AC Motors – 3-Phase

T-Frame ODP Motors – 3-phase – 1 to 50 hp

Motor Specifications – 3-phase MTDP Series Motors – 1800 & 3600 RPM									
Part Number	Price	HP	Voltage	Housing	NEMA Frame	Service Factor	F.L. Amps @ 208/230V/460V 60Hz	Approx Weight (lb)	Drawing Links
1800 RPM									
<u>MTDP-001-3BD18</u>	\$262.00	1	208– 230/460 VAC	ODP IP23	143T	1.15 (sine), 1.0 (drive)	2.9 / 2.6 / 1.3 3.1 / 2.8 / 1.4	33.1	PDF
<u>MTDP-1P5-3BD18</u>	\$326.00	1 1/2			145T		4.6 / 4.2 / 2.1	34.2	PDF
<u>MTDP-002-3BD18</u>	\$345.00	2			145T		5.9 / 5.4 / 2.7	38.6	PDF
<u>MTDP-003-3BD18</u>	\$419.00	3			182T		8.4 / 7.6 / 3.8 8.7 / 7.8 / 3.9	68.3	PDF
<u>MTDP-005-3BD18</u>	\$494.00	5			184T		13.6 / 12.4 / 6.2 13.7 / 12.4 / 6.2	91.5	PDF
<u>MTDP-7P5-3BD18</u>	\$675.00	7 1/2			213T		20.7 / 18.8 / 9.4 21.7 / 19.6 / 9.8	140.2	PDF
<u>MTDP-010-3BD18</u>	\$805.00	10			215T		28.3 / 25.6 / 12.8	156.0	PDF
<u>MTDP-015-3BD18</u>	\$1,102.00	15			254T		37.6 / 34.2 / 17.1 38.5 / 34.8 / 17.4	214.9	PDF
<u>MTDP-020-3BD18</u>	\$1,351.00	20			256T		49.5 / 45.0 / 22.5 51.5 / 46.6 / 23.3	260.1	PDF
<u>MTDP-025-3BD18</u>	\$1,644.00	25			284T		66.3 / 60.0 / 30.0	300.0	PDF
<u>MTDP-030-3BD18</u>	\$1,873.00	30			286T		79.4 / 71.8 / 35.9 77.6 / 70.2 / 35.1	330.0	PDF
<u>MTDP-040-3BD18</u>	\$2,446.00	40			324T		105.6 / 95.8 / 47.9	440.0	PDF
<u>MTDP-050-3BD18</u>	\$2,818.00	50			326T		130.3 / 117.4 / 58.7 131.2 / 118.6 / 59.3	470.0	PDF
3600 RPM									
<u>MTDP-003-3BD36</u>	\$417.00	3	208– 230/460 VAC	ODP IP23	145T	1.15 (sine), 1.0 (drive)	7.9 / 7.2 / 3.6 8.2 / 7.4 / 3.7	39.7	PDF
<u>MTDP-005-3BD36</u>	\$477.00	5			182T		12.3 / 11.8 / 5.9	64.9	PDF
<u>MTDP-7P5-3BD36</u>	\$677.00	7 1/2			184T		18.9 / 17.2 / 8.6 19.2 / 17.4 / 8.7	78.1	PDF

Specifications in GREEN apply to motors manufactured after September 2020

Note: Please review the AutomationDirect Terms & Conditions for warranty and service on this product.

IronHorse Motors with product numbers ending in P are Premium Efficiency motors and meet or exceed all current efficiency guidelines.



MTDP Open Drip-Proof AC Motors – 3-Phase

T-Frame ODP Motors – 3-phase – 1 to 50hp

Performance Data – 3-phase MTDP Series Motors (230V / 60Hz data except as indicated)																
Part Number	HP	NEMA Design	FL RPM	Current @ 230/460V (Amps)			Torque (lb-ft)			Min Speed (rpm)		Maximum Speed (rpm)		FL Efficiency (%)	FL Power Factor	Rotor Inertia (lb-ft ²)
				No Load	Full Load	Locked Rotor	Full Load	Locked Rotor	Break-down	CT 10:1	VT 20:1	CHP(1)	Safe			
1800 RPM																
MTDP-001-3BD18	1	B	1745	1.32 / 0.66	2.6 / 1.3	21.46 / 10.73	3.03	8.18	10.09	175.5	87.75	2700	3600	85.5	0.81	0.09
			1742	1.40 / 0.70	2.8 / 1.4	21.18 / 10.59		9.51	10.03							
MTDP-1P5-3BD18	1 1/2		1747	2.44 / 1.22	4.2 / 2.1	34.52 / 17.26	4.44	15.63	16.56	175.5	87.75	2700	3600	86.5	0.76	0.09
MTDP-002-3BD18	2		1744	2.96 / 1.48	5.4 / 2.7	47.24 / 23.62	6.06	21.15	23.45	175.5	87.75	2700	3600	86.5	0.79	0.10
MTDP-003-3BD18	3		1759	3.38 / 1.69	7.6 / 3.8	69.9 / 34.95	8.8	32.12	37.58	175.5	87.75	2700	3600	89.5	0.82	0.36
			1753	3.74 / 1.87	7.8 / 3.9	63.64 / 31.82		30.36	31.68						0.8	
MTDP-005-3BD18	5		1749	4.46 / 2.23	12.4 / 6.2	105.76 / 52.88	14.9	50.21	57.07	175.5	87.75	2700	3600	89.5	0.83	0.48
			1745			93.34 / 46.67		40.83	46.04						0.84	
MTDP-7P5-3BD18	7 1/2		1763	9.52 / 4.76	18.8 / 9.4	141.26 / 70.63	21.98	101.11	87.04	176	88	2700	3600	91	0.81	0.95
			1758	10.56 / 5.28	19.6 / 9.8	118.62 / 59.31	22.02	78.39	81.03						0.78	
MTDP-010-3BD18	10		1753	10.24 / 5.12	25.6 / 12.8	160.8 / 80.4	30.14	97.35	100.67	176	88	2700	3600	91.7	0.81	1.16
MTDP-015-3BD18	15		1776	10.2 / 5.1	34.2 / 17.1	261.8 / 130.9	43.63	101.22	128.27	176.5	88.2	2700	3600	93	0.87	2.03
			1774	11.4 / 5.7	34.8 / 17.4	235.6 / 117.8	43.6	113.36	120.30						0.85	
MTDP-020-3BD18	20		1765	11.06 / 5.53	45.0 / 22.5	325.2 / 162.6	59.84	175.93	166.36	176.5	88.2	2700	3600	93	0.9	2.44
			1769	13.96 / 6.98	46.6 / 23.3	303.4 / 151.7	59.67	154.54	178.40						0.86	
MTDP-025-3BD18	25		1775	24.6 / 12.3	60.0 / 30.0	380 / 190	72.30	175.69	184.37	177	88.5	2700	2700	93.6	0.83	3.25
MTDP-030-3BD18	30		1780	31.4 / 15.7	71.8 / 35.9	499.6 / 249.8	86.87	241.50	277.12	177	88.5	2700	2700	94.1	0.82	3.69
			1775	24.8 / 12.4	70.2 / 35.1	433 / 216.5	87.47	252.79	291.28						0.84	
MTDP-040-3BD18	40	1778	36.8 / 18.4	95.8 / 47.9	630 / 315	118.10	419.26	457.05	177.5	88.75	2700	2700	94.1	0.84	7.35	
MTDP-050-3BD18	50	1776	46 / 23	117.4 / 58.7	818 / 409	145.2	512.56	441.41	177.5	88.75	2700	2700	94.5	0.84	8.99	
		1781	46.2 / 23.1	118.6 / 59.3	771 / 385.5	146.7	476.78	517.85						0.84		
3600 RPM																
MTDP-003-3BD36	3	3439	2.82 / 1.41	7.2 / 3.6	68.62 / 34.31	4.51	17.27	18.67	350.5	175.25	5400	7200	85.5	0.87	0.07	
		3441	3.02 / 1.51	7.4 / 3.7	63.26 / 31.63	4.5	18.09	22.28						0.86		
MTDP-005-3BD36	5	3509	3.64 / 1.82	11.8 / 5.9	94.02 / 47.01	7.43	25.26	26.15	350.5	175.25	5400	7200	86.5	0.89	0.15	
MTDP-7P5-3BD36	7 1/2	3502	4.2 / 2.3	17.2 / 8.6	135.06 / 67.53	11.06	33.73	38.38	350.5	175.25	5400	5400	88.5	0.9	0.20	
		3499	4.86 / 2.43	17.36 / 8.68	132.26 / 66.13	11.02	33.17	41.99						0.88		

Specifications in GREEN apply to motors manufactured after September 2020



MTDP Series Open Drip-Proof AC Motors – 3-Phase

Current Diverter Rings (CDRs)

CDRs provide a premium shaft grounding solution that uses proprietary conductive filaments and maintenance free shaft sleeve to divert harmful shaft currents away from the bearings to ground.

Features

Conductive Filaments - provide a path to ground for shaft currents, away from the bearings.

Shaft Sleeve - promotes premium grounding performance through consistent contact with conductive filaments; prevents conduction inhibiting oxidation from forming on the shaft.

Conductive Rings - maintain conductivity for shaft currents and drives shaft sleeve.

- Standard Material: Bearing Bronze
- Movement: Axial- 0.13 mm [0.005 in] | Radial- 0.64 mm [0.025in] Consult Inpro/Seal engineering for shaft movement outside limits shown.
- Temperature (Elastomers): Conductive O-Ring: Conductive Silicone- -65°C [-85°F] – 232°C [450°F]
- Speed: 10,000 SFPM Consult Inpro/Seal engineering for speeds exceeding 6,000 SFPM.
- Shaft Size: 15.88 mm [0.625 in] – 508 mm [20 in] Consult engineering for shaft sizes above 203.2 mm [8 in]
- Mounting Configurations: Press-In, Clip-On, Side-Mount, Epoxy, Flexbracket, Bolt-Through
- Standard Overall Length: 8.89 mm [0.350 in]



Current Diverter Ring





MTDP Series Open Drip-Proof AC Motors – 3-Phase

T-Frame ODP Motors – 3-phase – 1 to 50 hp



Junction Box
MTADP-JBOX-140



C-Face Flange
MTADP-CFACE-140TC



Current Diverter Ring
MTADP-CDR-140



Drive End Endbell
MTADP-DEB-140



Opposite End Endbell
MTADP-OEB-140

MTDP Series 3-phase Motor Spare/Replacement Parts

Part Number	Price	Accessory Type	Applicable MTDP Motor Number	Motor HP
<u>MTADP-JBOX-140</u>	\$15.00	junction box	140T frame ODP	1, 1.5, 2, 3 HP
<u>MTADP-JBOX-180</u>	\$20.00		180T frame ODP	3, 5, 7.5HP
<u>MTADP-JBOX-210</u>	\$34.00		210T frame ODP	7.5, 10HP
<u>MTADP-JBOX-250</u>	\$34.00		250T frame ODP	15, 20HP
<u>MTADP-JBOX-280</u>	\$128.00		280T frame ODP	25, 30HP
<u>MTADP-JBOX-320</u>	\$161.00		320T frame ODP	40, 50HP
<u>MTADP-CFACE-140TC</u>	\$73.00	c-face flange	140T frame ODP	1, 1.5 HP
<u>MTADP-CFACE-180TC</u>	\$79.00		180T frame ODP	3, 5 HP
<u>MTADP-CFACE-210TC</u>	\$177.00		210T frame ODP	7.5, 10HP
<u>MTADP-CFACE-250TC</u>	\$193.00		250T frame ODP	15, 20HP
<u>MTADP-CFACE-280TC</u>	\$206.00		280T frame ODP	25, 30HP
<u>MTADP-CFACE-320TC</u>	\$288.00		320T frame ODP	40, 50HP
<u>MTADP-DEB-140</u>	\$51.00	drive end (DE) endbell	140T frame ODP	1, 1.5, 2, 3 HP
<u>MTADP-DEB-180</u>	\$52.00		180T frame ODP	3, 5, 7.5 HP
<u>MTADP-DEB-210</u>	\$76.00		210T frame ODP	7.5, 10HP
<u>MTADP-DEB-250</u>	\$112.00		250T frame ODP	15, 20HP
<u>MTADP-DEB-280</u>	\$461.00		280T frame ODP	25, 30HP
<u>MTADP-DEB-320</u>	\$711.00		320T frame ODP	40, 50HP
<u>MTADP-OEB-140</u>	\$50.00	opposite drive end (ODE) endbell	140T frame ODP	1, 1.5, 2, 3 HP
<u>MTADP-OEB-180</u>	\$56.00		180T frame ODP	3, 5 HP
<u>MTADP-OEB-210</u>	\$76.00		210T frame ODP	7.5, 10HP
<u>MTADP-OEB-250</u>	\$108.00		250T frame ODP	15, 20HP
<u>MTADP-OEB-280</u>	\$431.00		280T frame ODP	25, 30HP
<u>MTADP-OEB-320</u>	\$699.00		320T frame ODP	40, 50HP
<u>MTADP-CDR-140</u>	\$182.00	current diverter ring	140T frame ODP	1, 1.5, 2, 3 HP
<u>MTADP-CDR-180</u>	\$230.00		180T frame ODP	3, 5, 7.5 HP
<u>MTADP-CDR-210</u>	\$285.00		210T frame ODP	7.5, 10HP
<u>MTADP-CDR-250</u>	\$334.00		250T frame ODP	15, 20HP
<u>MTADP-CDR-280</u>	\$397.00		280T frame ODP	25, 30HP
<u>MTADP-CDR-320</u>	\$435.00		320T frame ODP	40, 50HP

* These accessories are spare/replacement components only for MTDP series IronHorse motors.



MTR2 & MTRP Series Rolled-Steel AC Motors – 3-Phase

56C/56HC-Frame TEFC Motors – 3-phase – 0.33 to 3 hp

Features

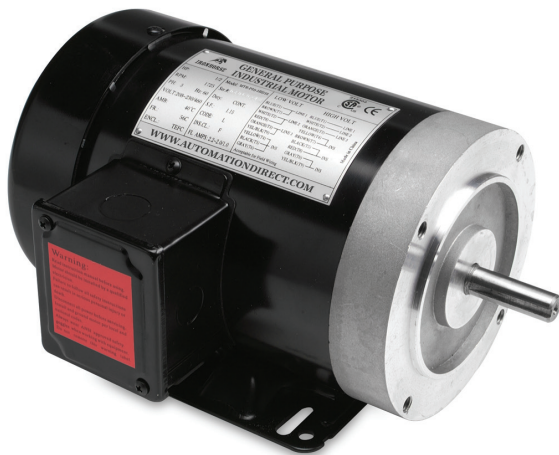
- Totally Enclosed Fan Cooled (TEFC) enclosure
- NEMA 56C or 56HC flange mount (56HC are suitable for 56, 143T, or 145T frame mounting dimensions)
- Rolled steel shell frame / cast aluminum end bell
- No mounting orientation restrictions
- Removable base / bolt-on/bolt-off mounting feet
- Steel fan cover
- Large easy-to-wire junction box with rubber gasket
- Heavy duty oversized ball bearings
- High tensile strength steel shaft
- Electrically reversible
- Inverter capable (3-phase only)
- NEMA design B
- Class F winding insulation
- Service Factor: 1.15 across-the-line (1.0 for 3-phase with AC drive)
- Two year warranty
- CCSAUS certified, CE

Accessories Available

- Junction boxes (replacement/spare)
- Fans (replacement/spare)
- Fan shrouds (replacement/spare)
- Motor bases (replacement/spare)
- Adjustable mounting slide bases

Applications

- Conveyors
- Fans
- Gear reducers
- Pumps



MTR Series 3-phase motor



MTRP Series 3-phase motor



MTR2 Series 3-phase motor



MTR2 & MTRP Series Rolled-Steel AC Motors – 3-Phase

56C/56HC-Frame TEFC Motors – 3-phase – 0.33 to 3 hp

Motor Specifications – 3-phase MTR2 & MTRP Series Motors – 1800 & 3600 RPM										
Part Number	Price	HP	Base RPM	Phase	Voltage	Housing	NEMA Frame	Service Factor	F.L. Amps @ 230V/460V	Approx Weight (lb)
MTR2-P33-3BD18	\$189.00	1/3	1800	3	230/460	TEFC rolled steel frame with cast aluminum end bell F1 conduit box location	56C flange mount (MTRP = 56HC)*	1.15	1.4 / 0.7	18
MTR2-P33-3BD36	\$167.00		3600						1.3 / 0.65	18
MTR2-P50-3BD18	\$198.00	1/2	1800						1.9 / 0.95	19
MTR2-P50-3BD36	\$175.00		3600						1.7 / 0.85	19
MTR2-P75-3BD18	\$216.00	3/4	1800						2.6 / 1.3	22
MTR2-P75-3BD36	\$185.00		3600						2.4 / 1.2	21
MTRP-001-3BD18	\$272.00	1	1800						3.2 / 1.6	35
MTRP-001-3BD36	\$223.00		3600						3.0 / 1.50	23
MTRP-1P5-3BD18	\$299.00	1-1/2	1800						4.5 / 2.25	43
MTRP-1P5-3BD36	\$252.00		3600						4.0 / 2.0	31
MTRP-002-3BD18	\$349.00	2	1800						6.0 / 3.0	49
MTRP-002-3BD36	\$272.00		3600						5.2 / 2.6	33
MTRP-003-3BD36	\$356.00	3	3600	7.4 / 3.7	39					

Note: Please review the AutomationDirect Terms & Conditions for warranty and service on this product.

IronHorse Motors with product numbers ending in P are Premium Efficiency motors and meet or exceed all current efficiency guidelines.

*56HC motors are capable of 56C C-face mounting, and are also compatible with 56, 143T, and 145T foot mounting dimensions.



MTR2 & MTRP Series Rolled-Steel AC Motors – 3-Phase

56C/56HC-Frame TEFC Motors – 3-phase – 0.33 to 3 hp – Performance Data

Performance Data – 3-phase MTR2 & MTRP Series Motors (460V data except as indicated) – 1800 & 3600 RPM

Part Number	HP	NEMA Design	FL RPM	Minimum Speed (rpm)		Current @ 230V/460V (Amps)			Torque (lb-ft)			Maximum Speed (rpm)		FL Efficiency (%)	FL Power Factor	Rotor Inertia (lb-ft ²)	Drawing Links
				CT	VT	No Load	Full Load	Locked Rotor	Full Load	Locked Rotor	Break-down	CHP*	Safe				
MTR2-P33-3BD18	1/3	B	1725	431	172	1.10 / 0.55	1.4 / 0.7	7 / 3.5	1.03	2.93	3.77	2700	5400	67.0	0.65	0.0329	PDF
MTR2-P33-3BD36			3450	862	345	0.8 / 0.4	1.3 / 0.65	7.6 / 3.8	0.50	1.14	1.99	5400		60.0	0.75	0.0245	PDF
MTR2-P50-3BD18	1/2		1725	431	172	1.36 / 0.68	1.9 / 0.95	10 / 5	1.53	3.81	4.96	2700		70	0.69	0.038	PDF
MTR2-P50-3BD36			3450	862	345	1.0 / 0.5	1.7 / 0.85	10.8 / 5.4	0.74	1.81	2.96	5400		67.5	0.74	0.0277	PDF
MTR2-P75-3BD18	3/4		1725	431	172	1.60 / 0.80	2.6 / 1.3	12.2 / 6.6	2.31	5.41	7.17	2700		73.0	0.73	0.048	PDF
MTR2-P75-3BD36			3450	862	345	1.3 / 0.7	2.4 / 1.2	16 / 8	1.14	2.95	4.25	5400		71.5	0.78	0.031	PDF
MTRP-001-3BD18	1		1760	440	176	2.18 / 1.09	3.22 / 1.61	31 / 16	3	12.35	14.51	2700	2700	85.5	0.69	0.107	PDF
MTRP-001-3BD36			3500	875	350	1.52 / 0.76	3.00 / 1.50	22 / 11	1.51	3.98	4.93	5400	5400	77	0.83	0.034	PDF
MTRP-1P5-3BD18	1-1/2		1760	440	176	2.8 / 1.4	4.52 / 2.26	47 / 24	4.4	21.68	21.76	2700	2700	86.5	0.72	0.135	PDF
MTRP-1P5-3BD36			3500	875	350	1.8 / 0.9	3.96 / 1.98	38 / 19	2.21	7.94	9.03	5400	5400	84.0	0.85	0.048	PDF
MTRP-002-3BD18	2		1760	440	176	3.62 / 1.81	5.92 / 2.96	61 / 31	6.03	27.3	27.46	2700	2700	86.5	0.74	0.158	PDF
MTRP-002-3BD36			3500	875	350	2.28 / 1.14	5.22 / 2.61	53 / 27	3.02	12.23	12.8	5400	5400	85.5	0.86	0.056	PDF
MTRP-003-3BD36	3	3500	875	350	3.54 / 1.77	7.38 / 3.69	89 / 45	4.49	19.44	20.39	5400	5400	86.5	0.85	0.069	PDF	

* Maximum Constant HP RPM is for direct coupled loads.



MTR Centrifugal Jet Pump 3-phase TEFC Motors

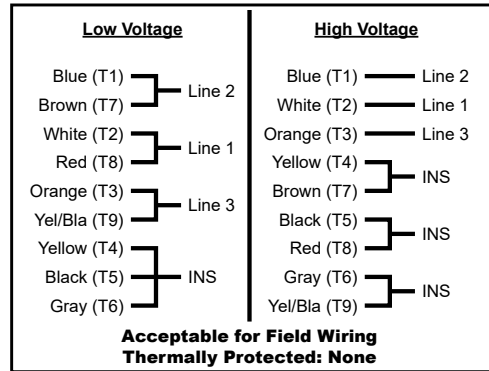
Features

- 1/3 - 3 HP
- 3600 RPM
- 208-230/460 volt
- Totally Enclosed Fan Cooled (TEFC) Enclosure
- 1.15 SF
- Class F insulation
- C-face with Removable Base
- Vacuum Pressure Impregnation (VPI) System
- Anti-rust film applied to rotor
- Improved shaft seal on drive-end protects drive-end bearing from moisture and contaminants
- 56J - Threaded Shaft
- IP43 Protection

Applications

- Typical uses include: jet pumps and jet pump motor replacements.

Wiring Diagram



MTRJ-P33-3BD36J

Motor Specifications – 3-phase											
Part Number	Price	HP*	Base RPM *	Volts*	Encl.	NEMA Frame	Service Factor*	F.L. Amps*	Sound Power (dB)	Weight (lb)	Drawing Links
Removable Rigid Base With C-face - 3600 RPM											
MTRJ-P33-3BD36J	\$167.00	1/3 (1/4)	3600 (3000)	230/460 VAC (190/380)	TEFC	56J	1.15 (1.15)	1.3 / 0.65 (1.2/0.6)	80 dB(A)	18	PDF
MTRJ-P50-3BD36J	\$173.00	1/2 (1/3)						1.7 / 0.85 (1.5/0.75)		19	PDF
MTRJ-P75-3BD36J	\$189.00	3/4 (1/2)						2.4 / 1.2 (1.96/0.98)		21.6	PDF
MTRJP-001-3BD36J	\$205.00	1 (3/4)		208-230/460 VAC (190/380)				3.00/1.50 (2.76/1.38)	22.9	PDF	
MTRJP-1P5-3BD36J	\$259.00	1 1/2 (1)						3.96/1.98 (3.42/1.71)	30.5	PDF	
MTRJP-002-3BD36J	\$271.00	2 (1)						5.22/2.61 (4.78/2.39)	33.4	PDF	
MTRJP-003-3BD36J	\$346.00	3 (2)						7.38/3.69 (6.32/3.16)	38.8	PDF	

*@ 60Hz (@ 50Hz)

Performance Data – 3-phase													
Part Number	HP*	F.L. RPM*	NEMA Design	F.L. Effic. %	Current			Torque			F.L. Power Factor	Moment of Inertia (lb-ft ²)	
					Full Load Amps	Locked Rotor Amps	No Load Current	Full Load (lb-ft)	Locked Rotor	Breakdown			Pull Up
Removable Rigid Base With C-face - 3600 RPM													
MTRJ-P33-3BD36J	1/3 (1/4)	3450 (2850)	B	62.0	1.3 / 0.65	3.63	0.44	0.51	180	355	215	79.00	0.02450
MTRJ-P50-3BD36J	1/2 (1/3)			66.0	1.7 / 0.85	3.85	0.43	0.76	150	255	155	86.00	
MTRJ-P75-3BD36J	3/4 (1/2)			74.0	2.4 / 1.2	8.27	0.69	1.12	230	380	275	81.00	
MTRJP-001-3BD36J	1 (3/4)	3500 (2915)		77.0	3.00/1.50	11.37	0.78	1.51	255	325	220	83.00	0.03420
MTRJP-1P5-3BD36J	1 1/2 (1)			84.0	3.96/1.98	25.1	1.08	2.21	495	600	485	82.00	0.04730
MTRJP-002-3BD36J	2 (1)			85.5	5.22/2.61	27.38	1.12	3.02	385	415	315	85.00	0.05610
MTRJP-003-3BD36J	3 (2)			86.5	7.38/3.69	44.55	1.77	4.50	430	450	300		0.06910

*@ 60Hz (@ 50Hz)



MTR2 / MTRP / MTRJ Series AC Motor Accessories – 3-Phase

56C-Frame TEFC Motors – 3-phase – 0.33 to 3 hp – Motor Accessories



Motor Base
MTAR-BASE-56



Fan
MTAR-FAN-56



Fan
MTA2-FAN-56



Fan
MTA2-FAN-56-1



Junction Box
MTAR-JBOX-56



Fan Shroud
MTAR-SHROUD-56

MTR Series 3-phase Motor Spare/Replacement Parts*				
<i>Part Number</i>	<i>Price</i>	<i>Accessory Type</i>	<i>Applicable MTR Motor Number</i>	<i>MTR Motor HP : RPM</i>
<u>MTAR-BASE-56</u>	\$14.50	Motor base	MTR-xxx-xBDxx	All
<u>MTAR-FAN-56</u>	Retired	Fan		
<u>MTAR-JBOX-56</u>	Retired	Junction box		
<u>MTAR-SHROUD-56</u>	\$14.50	Fan shroud		

* These accessories are spare/replacement components only for MTR series IronHorse motors.

MTR2/MTRP/MTRJ Series 3-phase Motor Spare/Replacement Parts				
<i>Part Number</i>	<i>Price</i>	<i>Accessory Type</i>	<i>Applicable MTRP Motor Number</i>	<i>MTRP Motor HP : RPM</i>
<u>MTA2-BASE-56</u>	\$22.00	Motor base	MTRP-xxx-3BDxx MTR2-Pxx-3BDxx MTRJ-Xxx-3BDxx	All
<u>MTA2-SHROUD-56</u>	\$22.00	Fan shroud		
<u>MTA2-JBOX-56</u>	\$22.00	Junction box		
<u>MTA2-FAN-56</u>	\$22.00	Fan		
<u>MTA2-FAN-56-1</u> *	\$14.00	Fan	MTRP-xxx-3BDxx MTRJP-Xxx-3BDxx	

* This accessory is a spare/replacement component only for MTRP series IronHorse motors.

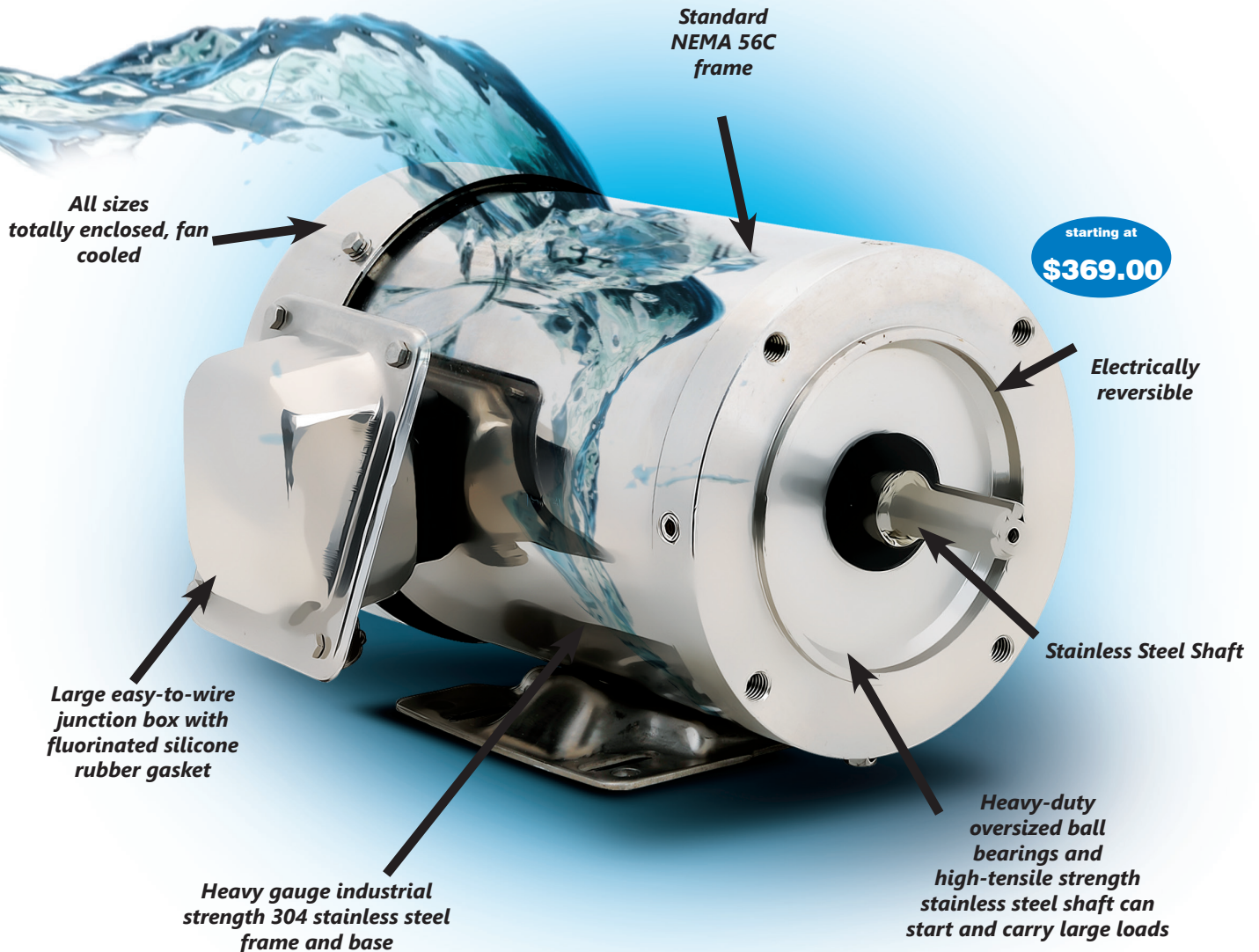
IronHorse is ready for washdowns and harsh environments!



IRONHORSE[®]
AUTOMATIONDIRECT[®]

IP56 environmental rating

MTSS Stainless Steel 56C Frame Motors 0.33 to 0.75 hp



Three-phase - 208-230/460 Volt, 56C Frame - TEFC Enclosure, 1800 & 3600 RPM

- 0.33 to 0.75 hp
- Electrically reversible
- Round body motors (no base) also available
- Heavy gauge stainless steel shaft, frame

- and base
- Available with or without mounting feet
- Includes pre-installed IP66 cord grip

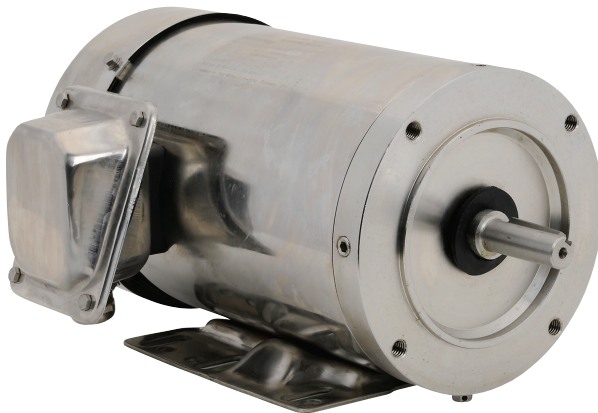


MTSS Series Stainless-Steel 3-phase General-Purpose AC Motors

MTSS Stainless Steel TEFC Motors – 3-phase – 0.33 to 0.75 hp



MTSS-xxx-3BDxxR
3-Phase Stainless Steel 56C Frame without Feet



MTSS-xxx-3BDxx
3-Phase Stainless Steel 56C Frame with Feet

Features

- Totally Enclosed Fan Cooled (TEFC) enclosure
- NEMA 56C flange mount
- 304 stainless steel shell frame
- No mounting orientation restrictions
- Stainless steel shaft
- Large easy-to-wire junction box with fluorinated silicone rubber gasket
- Nickel-plated brass cable gland included
- IP56 environmental rating
- Available with or without mounting feet
- Heavy-duty permanently-sealed oversized ball bearings
- Nameplate information with wiring diagram etched into frame
- Electrically reversible
- NEMA design B
- Class F winding insulation
- Service Factor: 1.15 across-the-line (1.0 with AC drive)
- One year warranty
- cCSA_{us} certified

Accessories & Spare Parts Available

- Nickel-plated brass cable gland (spare/replacement)

Applications

- Conveyors
- Fans
- Gear reducers
- Pumps
- Inverter capable
- Washdown environments



MTSS Stainless-Steel 3-phase General-Purpose AC Motors

56C Frame Stainless Steel TEFC Motors – 3-phase – 0.33 to 0.75 hp

Motor Specifications – 3-phase MTSS Series Stainless Steel Motors – 1800 & 3600 RPM											
Part Number	Price	HP	Base RPM	Phase	Voltage	Housing	NEMA Frame	Service Factor	F.L. Amps @ 208-230V/460V	Approx Weight (lb)	Drawing Links
MTSS-P33-3BD18R	\$369.00	1/3	1800	3	208-230/460	TEFC	56C flange mount	1.15	1.5-1.4 / 0.7	27	PDF
MTSS-P50-3BD18R	\$375.00	1/2				stainless steel frame with round body			1.55-1.5 / 0.75	27	PDF
MTSS-P75-3BD18R	\$387.00	3/4	1800	3	208-230/460	F1 conduit box location	56C flange mount	1.15	2.6-2.4 / 1.2	29	PDF
MTSS-P33-3BD18	\$384.00	1/3				TEFC			1.5-1.4 / 0.7	28	PDF
MTSS-P50-3BD18	\$390.00	1/2	1800	3	208-230/460	stainless steel frame with rigid base	56C flange mount	1.15	1.55-1.5 / 0.75	28	PDF
MTSS-P50-3BD36	\$381.00		3600						1.99-1.8 / 0.9	29	PDF
MTSS-P75-3BD18	\$402.00	3/4	1800	3	208-230/460	F1 conduit box location	56C flange mount	1.15	2.6-2.4 / 1.2	30	PDF
MTSS-P75-3BD36	\$388.00		3600						2.4-2.3 / 1.15	31	PDF

Note: Please review the AutomationDirect Terms & Conditions for warranty and service on this product.

Performance Data – 3-phase MTSS Series Stainless Steel Motors (460V data except as indicated) – 1800 & 3600 RPM

Part Number	HP	NEMA Design	FL RPM	Minimum Speed (rpm)		Current @ 460V (Amps)		Torque (lb-ft)			Maximum Speed (rpm)		FL Efficiency (%)	FL Power Factor	Rotor Inertia (lb-ft ²)
				CT (2:1)	VT (5:1)	No Load	Locked Rotor	Full Load	Locked Rotor	Break-down	CHP*	Safe			
MTSS-P33-3BD18(R)	1/3	B	1725	900	360	0.29	4.2	1.0	2.9	3.9	2250	4500	82.5	0.71	0.078
MTSS-P50-3BD18(R)	1/2		1725	900	360	0.30	4.6	1.5	3.8	5.2	2250		82.5	0.76	0.078
MTSS-P50-3BD36			3460	1800	720	0.36	6.0	0.7	1.9	2.5	4500		77.0	0.88	0.077
MTSS-P75-3BD18(R)	3/4		1725	900	360	0.44	7.3	2.2	5.0	7.0	2250		82.5	0.78	0.081
MTSS-P75-3BD36			3470	1800	720	0.43	7.6	1.1	2.7	3.3	4500		73.0	0.84	0.100

* Maximum Coupled HP speed is for direct-coupled loads.

IronHorse MTS Washdown 3-phase Motors

Features

- 1/3-20 HP, 3600 and 1800 RPM
- 1/2-5 HP, 1200 RPM
- 208-230/460 volt, 60 Hz
- Fan Cooled (TEFC) or Non Ventilated (TENV) Enclosure
- IP69K Protection
- 1.15 SF
- Class F Insulation with Class B Temperature Rise
- C-Face with Rigid Base and Round Body (Footless)
- Premium Efficiency (EISA Compliant)
- NEMA Design B
- Continuous Duty
- 304 Stainless Steel Frame, End Bracket, Junction Box, and Hardware
- Stainless Steel Shaft and Key
- F1 Junction Box Location
- Horizontal or Vertical Mounting
- Lip Seal on DE and ODE
- Round Welded Junction Box with Epoxy Potted Leads
- Double Sealed Bearings Pre-Packed with Mobil Polyrex EM Grease
- Inverter Duty – 10:1 Constant Torque (CT) / 20:1 Variable Torque (VT)
- Class 1 Division 2 Groups A, B, C, D – Temperature Code T2B
- Ambient -20°C to +40°C, Altitude up to 3300 Feet Above Sea Level (FASL)
- Bi-directional Rotation
- Bakery Equipment Assessment Group (BEAG) certified (Previously BISSC)
- In Accordance with NEMA, CSA, UR, and CE



MTSP-P33-3BD18



MTSP-P33-3BD18R

Applications

Ideal for use in food and chemical processing plants, pharmaceutical applications, and other environments where corrosion-resistant, watertight motors are required.

Motor Specifications – 3-phase													
Part Number	Price	HP*	Base RPM *	Volts*	Encl.	NEMA Frame	Service Factor*	F.L. Amps*	Sound Power (dB)	Weight (lb)	Drawing Links		
Rigid Base With C-face - 1800 RPM													
MTSN-P33-3BD18	\$434.00	1/3 (1/4)	1800 (1500)	208-230/460 VAC (190/380)	TENV	56C	1.15 (1.15)	1.5-1.4/0.7 (1.5-1.4/0.7)	58 dB(A)	28	PDF		
MTSP-P33-3BD18	\$434.00				TEFC			1.4-1.2/0.6 (1.4-1.2/0.6)	60 dB(A)		PDF		
MTSN-P50-3BD18	\$443.00	1/2 (1/3)			TENV			56C	1.15 (1.15)	1.8-1.6/0.8 (1.8-1.6/0.8)	58 dB(A)	30	PDF
MTSP-P50-3BD18	\$443.00				TEFC					60 dB(A)	PDF		
MTSN-P75-3BD18	\$480.00	3/4 (1/2)			TENV			56C	1.15 (1.15)	2.6-2.4/1.2 (2.6-2.4/1.2)	58 dB(A)	33	PDF
MTSP-P75-3BD18	\$480.00				TEFC					2.5-2.4/1.2 (2.5-2.4/1.2)	60 dB(A)		PDF
MTSN-001-3BD18	\$619.00	1 (3/4)			TENV			56C	1.15 (1.15)	3.3-3.1/1.55 (3.3-3.1/1.55)	59 dB(A)	42	PDF
MTSP-001-3BD18	\$548.00				TEFC					3.1-2.8/1.45 (3.1-2.8/1.45)	61 dB(A)		PDF
MTSN-1P5-3BD18	\$677.00	1 1/2 (1)			TENV			145TC	1.15 (1.15)	4.8-4.4/2.2 (4.8-4.4/2.2)	60 dB(A)	51	PDF
MTSN-1P5-3BD18-14	\$694.00				TEFC			56C		4.1-4.0/2.0 (4.1-4.0/2.0)	61 dB(A)		PDF
MTSP-1P5-3BD18	\$617.00				145TC			56C		65	6-5.4/2.7 (6-5.4/2.7)	60 dB(A)	PDF
MTSP-1P5-3BD18-14	\$634.00				TENV			145TC			6.2-6.0/3.0 (6.2-6.0/3.0)	61 dB(A)	PDF
MTSN-002-3BD18	\$1,160.00	2 (1 1/2)	TENV	182TC	1.15 (1.15)	8.3-7.6/3.8 (8.3-7.6/3.8)	62 dB(A)	99	PDF				
MTSN-002-3BD18-14	\$1,173.00		TEFC	56C		8.8-8.2/4.1 (8.8-8.2/4.1)	64 dB(A)		PDF				
MTSP-002-3BD18	\$668.00		145TC	56C		100	13-12.5/6.25 (13-12.5/6.25)	60 dB(A)	PDF				
MTSP-002-3BD18-14	\$685.00		TENV	145TC			20-18.6/9.3 (20-18.6/9.3)	69 dB(A)	180	PDF			
MTSN-003-3BD18-18	\$1,619.00	3 (2)	TENV	184TC	1.15 (1.15)	26-24.4/12.2 (26-24.4/12.2)	62 dB(A)	210	PDF				
MTSP-003-3BD18-18	\$1,351.00		TEFC	213TC		40-37/18.5 (40-37/18.5)	69 dB(A)		370	PDF			
MTSP-005-3BD18	\$1,513.00	5 (3)	215TC	254TC	1.15 (1.15)	53-49/24.5 (53-49/24.5)	69 dB(A)	436	PDF				
MTSP-7P5-3BD18	\$2,148.00	7 1/2 (5)	254TC	256TC		69 dB(A)	PDF						
MTSP-010-3BD18	\$2,343.00	10 (7 1/2)	256TC										
MTSP-015-3BD18	\$5,097.00	15 (10)											
MTSP-020-3BD18	\$5,550.00	20 (15)											

*@ 60Hz (@ 50Hz)

IronHorse MTS Washdown 3-phase Motors

IRONHORSE®

Motor Specifications – 3-phase													
Part Number	Price	HP*	Base RPM *	Volts*	Encl.	NEMA Frame	Service Factor*	F.L. Amps*	Sound Power (dB)	Weight (lb)	Drawing Links		
Rigid Base With C-face - 1200 RPM													
MTSP-P50-3BD12	\$505.00	1/2 (1/3)	1200 (1000)	208-230/460 VAC (190/380)	TEFC	56C	1.15 (1.15)	1.9-1.8/0.9 (1.9-1.8/0.9)	55 dB(A)	30	PDF		
MTSP-P75-3BD12	\$548.00	3/4 (1/2)						3.8-3.7/1.85 (3.8-3.7/1.85)					
MTSP-001-3BD12	\$648.00	1 (3/4)						4.2-4.0/2.0 (4.2-4.0/2.0)					
MTSP-1P5-3BD12	\$1,101.00	1 1/2 (1)						5.3-4.9/2.45 (5.3-4.9/2.45)	57 dB(A)	82	PDF		
MTSP-002-3BD12	\$1,200.00	2 (1 1/2)						6.6-6.1/3.05 (6.6-6.1/3.05)					
MTSP-003-3BD12	\$1,877.00	3 (2)						10-9.2/4.6 (10-9.2/4.6)					
MTSP-005-3BD12	\$2,209.00	5 (3)						15-14.0/7.0 (15-14.0/7.0)	61 dB(A)	170	PDF		
													200
Rigid Base With C-face - 3600 RPM													
MTSN-P33-3BD36	\$418.00	1/3 (1/4)	3600 (3000)	208-230/460 VAC (190/380)	TENV	56C	1.15 (1.15)	1.2-1.1/0.55 (1.2-1.1/0.55)	73 dB(A)	26	PDF		
MTSP-P33-3BD36	\$418.00				TEFC				75 dB(A)		PDF		
MTSN-P50-3BD36	\$432.00	1/2 (1/3)			TENV			1.6-1.5/0.75 (1.6-1.5/0.75)	73 dB(A)	29	PDF		
MTSP-P50-3BD36	\$432.00				TEFC				75 dB(A)		PDF		
MTSN-P75-3BD36	\$497.00	3/4 (1/2)			TENV			2.3-2.2/1.1 (2.3-2.2/1.1)	73 dB(A)	33	PDF		
MTSP-P75-3BD36	\$497.00				TEFC				75 dB(A)		PDF		
MTSN-001-3BD36	\$601.00	1 (3/4)			TENV			3-2.8/1.4 (3-2.8/1.4)	74 dB(A)	39	PDF		
MTSP-001-3BD36	\$548.00				TEFC				76 dB(A)		PDF		
MTSN-1P5-3BD36	\$660.00	1 1/2 (1)			TENV			4-3.7/1.85 (4-3.7/1.85)	74 dB(A)	46	PDF		
MTSN-1P5-3BD36-14	\$680.00				TEFC				56C		4.2-4.0/2.0 (4.2-4.0/2.0)	76 dB(A)	39
MTSP-1P5-3BD36	\$600.00				143TC								
MTSP-1P5-3BD36-14	\$617.00				56C								
MTSN-002-3BD36	\$1,039.00	2 (1 1/2)			TENV			5.5-5/2.5 (5.5-5/2.5)	75 dB(A)	60	PDF		
MTSN-002-3BD36-14	\$1,052.00				TEFC				145TC				
MTSP-002-3BD36	\$651.00				56C								
MTSP-002-3BD36-14	\$671.00				145TC								
MTSN-003-3BD36-18	\$1,567.00	3 (2)			TENV			8-7.2/3.6 (8-7.2/3.6)	76 dB(A)	46	PDF		
MTSP-003-3BD36-18	\$1,334.00				TEFC						182TC		
			TEFC	145TC									
MTSP-005-3BD36	\$1,465.00	5 (3)			78 dB(A)	95	PDF						
								81		PDF			
										95	PDF		

*@ 60Hz (@ 50Hz)

IronHorse MTS Washdown 3-phase Motors

IRONHORSE®

Performance Data - 3-phase															
Part Number	HP*	F.L. RPM*	NEMA Design	F.L. Effic. %	Current			Torque				F.L. Power Factor	Moment of Inertia (lb-ft ²)		
					Full Load Amps	Locked Rotor Amps	No Load Current	Full Load (lb-ft)	Locked Rotor	Breakdown	Pull Up			% of F.L. Torque	
Rigid Base With C-face - 1800 RPM															
MTSN-P33-3BD18	1/3 (1/4)	1760 (1455)	B	74.0	1.5-1.4/0.7	6.5	1-1.1/0.55	1.00	300	400	300	62.00	0.06200		
MTSP-P33-3BD18		1745 (1455)			1.4-1.2/0.6		1.23/0.65					71.00			
MTSN-P50-3BD18	1/2 (1/3)	1745 (1450)		78.5	1.8-1.6/0.8	10	1.2-1.3/0.65	1.50	285	300	250	70.00	0.06900		
MTSP-P50-3BD18							1.44-1.30/0.65					71.00			
MTSN-P75-3BD18	3/4 (1/2)	1755 (1460)		81.5	2.6-2.4/1.2	12.5	1.65-1.8/0.9	2.20		320		69.00	0.08400		
MTSP-P75-3BD18		1745 (1455)					2.5-2.4/1.2					2.10-1.90/0.95		71.00	
MTSN-001-3BD18	1 (3/4)	1755 (1460)		85.5	3.3-3.1/1.55	15	1.8-2/1	3.00	300	400	290	74.00	0.13800		
MTSP-001-3BD18		1750 (1460)					3.1-2.8/1.45		2.76-2.50/1.25	285	300	75.00	0.10000		
MTSN-1P5-3BD18	1 1/2 (1)	1755 (1460)		86.5	4.8-4.4/2.2	20	2.55-2.8/1.4	4.40	300	400	250	74.00	0.18400		
MTSN-1P5-3BD18-14							1750 (1460)		4.1-4.0/2.0	3.32-3.00/1.50		285	300	75.00	0.13800
MTSP-1P5-3BD18															
MTSP-1P5-3BD18-14															
MTSN-002-3BD18	2 (1 1/2)	1750 (1455)		86.5	6-5.4/2.7	25	2.9-3.2/1.6	5.90	300	400	200	79.00	0.25000		
MTSN-002-3BD18-14							1750 (1455)		6.2-6.0/3.0	3.87-3.50/1.75		285	300	78.00	0.18400
MTSP-002-3BD18															
MTSP-002-3BD18-14															
MTSN-003-3BD18-18	3 (2)	1760 (1455)		89.5	8.3-7.6/3.8	32	3.2-3.5/1.75	8.80	240	310	240	82.00	0.50000		
MTSP-003-3BD18-18		1750 (1470)			8.8-8.2/4.1		3.6-4/2		270	80.00	0.25300				
MTSP-005-3BD18	5 (3)	1765 (1465)	89.5	13-12.5/6.25	46	6.63-6.00/3.00	14.70	225	280	220	85.00	0.50000			
MTSP-7P5-3BD18	7 1/2 (5)	1755 (1470)	91.7	20-18.6/9.3	63.5	9.95-9.00/4.50	22.00	270	210	83.00	0.92700				
MTSP-010-3BD18	10 (7 1/2)	1760 (1470)	91.7	26-24.4/12.2	81	12.16-11.00/5.50	29.30	265	190	85.00	1.16000				
MTSP-015-3BD18	15 (10)	1765 (1470)	92.4	40-37/18.5	116	x-14.4/7.2	44.00	200	260	170	85.00	1.80000			
MTSP-020-3BD18	20 (15)		93.0	53-49/24.5	145	x-17.1/8.57	58.60	250	170	78.00	2.40000				
Rigid Base With C-face - 1200 RPM															
MTSP-P50-3BD12	1/2 (1/3)	1155 (970)	B	75.5	1.9-1.8/0.9	10	x-1.8 / 0.9	2.20	270	220	63.00	0.08800			
MTSP-P75-3BD12	3/4 (1/2)	1155 (960)		81.5	3.8-3.7/1.85	12.5	x-1.7/0.85	3.30			280	65.00	0.10300		
MTSP-001-3BD12	1 (3/4)	1165 (960)		82.5	4.2-4.0/2.0	15	x-2.5/1.25	4.40	270	70.00	0.41600				
MTSP-1P5-3BD12	1 1/2 (1)	1170 (980)		87.5	5.3-4.9/2.45	20	x-3.24/1.62	6.60	71.00	0.61000					
MTSP-002-3BD12	2 (1 1/2)	1175 (980)		88.5	6.6-6.1/3.05	25	x-4.2/2.1	8.80	250	280	210	74.00	1.05500		
MTSP-003-3BD12	3 (2)			89.5	10-9.2/4.6	32	x-6.4/3.2	13.20	225	270	78.00	1.35600			
MTSP-005-3BD12	5 (3)			15-14.0/7.0	46	x-9.2/4.6	22.10								

*@ 60Hz (@ 50Hz)

IronHorse MTS Washdown 3-phase Motors

IRONHORSE®

Performance Data - 3-phase																				
Part Number	HP*	F.L. RPM*	NEMA Design	F.L. Effic. %	Current			Torque				F.L. Power Factor	Moment of Inertia (lb-ft ²)							
					Full Load Amps	Locked Rotor Amps	No Load Current	Full Load (lb-ft)	Locked Rotor	Breakdown	Pull Up			% of F.L. Torque						
Rigid Base With C-face - 3600 RPM																				
<u>MTSN-P33-3BD36</u>	1/3 (1/4)	3500 (2890)	B	72.0	1.2-1.1/0.55	6.5	0.72-0.8/0.4	0.50	290	320	250	78.00	0.02700							
<u>MTSP-P33-3BD36</u>							1.06/0.53					85.00								
<u>MTSN-P50-3BD36</u>	1/2 (1/3)	3490 (2900)		74.0	1.6-1.5/0.75	10	0.9-0.95/0.475	0.70	285	300	250	83.00	0.03600							
<u>MTSP-P50-3BD36</u>		3460 (2900)					1.06-0.96/0.48					87.00								
<u>MTSN-P75-3BD36</u>	3/4 (1/2)	3500 (2890)		77.0	2.3-2.2/1.1	12.5	1-1.1/0.55	1.10	320	430	300	83.00	0.05000							
<u>MTSP-P75-3BD36</u>							1.22-1.10/0.55					88.00								
<u>MTSN-001-3BD36</u>	1 (3/4)	3530 (2915)		80.0	3-2.8/1.4	15	1.4-1.5/0.75	1.50	285	300	250	83.00	0.07200							
<u>MTSP-001-3BD36</u>		3470 (2890)			77.0		2.9-2.8/1.4					1.55-1.40/0.70		90.00	0.05400					
<u>MTSN-1P5-3BD36</u>	1 1/2 (1)	3525 (2910)		84.0	4-3.7/1.85	20	1.3-1.4/0.7	2.30	285	300	250	89.00	0.09400							
<u>MTSN-1P5-3BD36-14</u>							3480 (2900)					4.2-4.0/2.0		1.77-1.60/0.80	91.00	0.07200				
<u>MTSP-1P5-3BD36</u>															3520 (2915)		85.5	5.5-5/2.5	1.8-2/1	90.00
<u>MTSP-1P5-3BD36-14</u>							3480 (2900)					4.9-4.8/2.4		1.92-1.74/0.87		91.00		0.09400		
<u>MTSN-002-3BD36</u>	2 (1 1/2)	3520 (2915)	85.5	5.5-5/2.5	25	1.8-2/1	2.90	230	290	200	89.00	0.26000								
<u>MTSN-002-3BD36-14</u>											3480 (2900)		86.5	8-7.2/3.6	2.35-2.6/1.3	4.40	270	240	85.00	0.14500
<u>MTSP-002-3BD36</u>														3535 (2925)	86.5	8.8-8.1/4.05	4.87-4.40/2.20	7.30	225	
<u>MTSP-002-3BD36-14</u>											3480 (2900)		4.9-4.8/2.4			1.92-1.74/0.87	91.00	0.09400		
<u>MTSN-003-3BD36-18</u>	3 (2)	3535 (2925)	86.5	8-7.2/3.6	32	2.35-2.6/1.3	4.40	230	290	200	89.00	0.26000								
<u>MTSP-003-3BD36-18</u>		3510 (2910)		8.8-8.1/4.05		4.87-4.40/2.20					7.30		225	220	91.00	0.26000				
<u>MTSP-005-3BD36</u>	5 (3)	3525 (2930)	88.5	12.6-12.2/6.1	46	4.87-4.40/2.20	7.30	225	280	220	91.00	0.26000								

*@ 60Hz (@ 50Hz)

IronHorse MTS Washdown 3-phase Motors

IRONHORSE®

Motor Specifications – 3-phase												
Part Number	Price	HP*	Base RPM *	Volts*	Encl.	NEMA Frame	Service Factor*	F.L. Amps*	Sound Power (dB)	Weight (lb)	Drawing Links	
C-face - 1800 RPM												
MTSN-P33-3BD18R	\$417.00	1/3 (1/4)	1800 (1500)	208–230/460 VAC (190/380)	TENV	56C	1.15 (1.15)	1.5-1.4/0.7 (1.5-1.4/0.7)	58 dB(A)	28	PDF	
MTSP-P33-3BD18R	\$415.00				TEFC			1.4-1.2/0.6 (1.4-1.2/0.6)	60 dB(A)	27	PDF	
MTSN-P50-3BD18R	\$427.00	1/2 (1/3)			TENV			1.8-1.6/0.8 (1.8-1.6/0.8)	58 dB(A)	30	PDF	
MTSP-P50-3BD18R	\$426.00				TEFC				60 dB(A)	29	PDF	
MTSN-P75-3BD18R	\$463.00	3/4 (1/2)			TENV			2.6-2.4/1.2 (2.6-2.4/1.2)	58 dB(A)	33	PDF	
MTSP-P75-3BD18R	\$459.00				TEFC				60 dB(A)	32	PDF	
MTSN-001-3BD18R	\$602.00	1 (3/4)			TENV			3.3-3.1/1.55 (3.3-3.1/1.55)	59 dB(A)	42	PDF	
MTSP-001-3BD18R	\$528.00				TEFC				61 dB(A)	35	PDF	
MTSN-1P5-3BD18R	\$660.00	1 1/2 (1)			TENV			4.8-4.4/2.2 (4.8-4.4/2.2)	60 dB(A)	51	PDF	
MTSN-1P5-3BD18R-14	\$678.00				145TC				PDF			
MTSP-1P5-3BD18R	\$596.00				56C				4.1-4.0/2.0 (4.1-4.0/2.0)	61 dB(A)	41	PDF
MTSP-1P5-3BD18R-14	\$610.00				145TC					PDF		
MTSN-002-3BD18R	\$1,126.00	2 (1 1/2)	TENV	6.5-4.2/2.7 (6.5-4.2/2.7)	60 dB(A)	65	PDF					
MTSN-002-3BD18R-14	\$1,139.00		145TC		PDF							
MTSP-002-3BD18R	\$647.00		56C		6.2-6.0/3.0 (6.2-6.0/3.0)	61 dB(A)	50	PDF				
MTSP-002-3BD18R-14	\$665.00		145TC			PDF						
C-face - 3600 RPM												
MTSP-P33-3BD36R	\$401.00	1/3 (1/4)	3600 (3000)	208–230/460 VAC (190/380)	TEFC	56C	1.15 (1.15)	1.2-1.1/0.55 (1.2-1.1/0.55)	75 dB(A)	25	PDF	
MTSP-P50-3BD36R	\$415.00	1/2 (1/3)						1.6-1.5/0.75 (1.6-1.5/0.75)		28	PDF	
MTSP-P75-3BD36R	\$480.00	3/4 (1/2)						2.3-2.2/1.1 (2.3-2.2/1.1)		32	PDF	
MTSP-001-3BD36R	\$531.00	1 (3/4)						2.9-2.8/1.4 (2.9-2.8/1.4)	34	PDF		
MTSP-1P5-3BD36R	\$582.00	1 1/2 (1)						4.2-4.0/2.0 (4.2-4.0/2.0)	76 dB(A)	38	PDF	
MTSP-1P5-3BD36R-14	\$600.00							143TC		PDF		
MTSP-002-3BD36R	\$630.00	2 (1 1/2)						56C	4.9-4.8/2.4 (4.9-4.8/2.4)	45	PDF	
MTSP-002-3BD36R-14	\$651.00							145TC		PDF		

*@ 60Hz (@ 50Hz)

IronHorse MTS Washdown 3-phase Motors

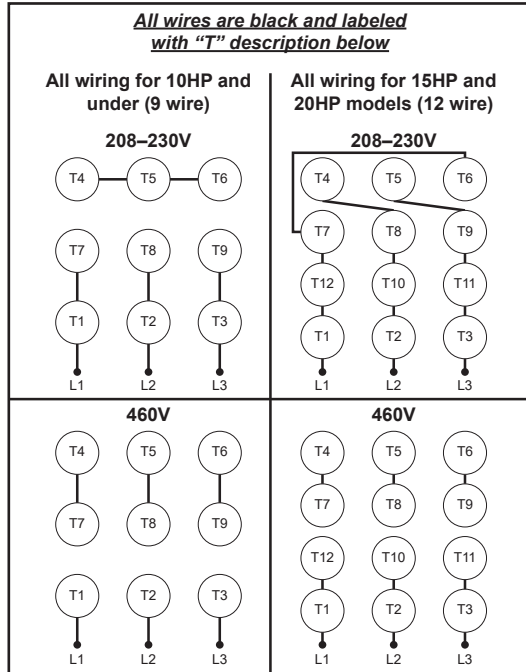
IRONHORSE®

Performance Data - 3-phase																	
Part Number	HP*	F.L. RPM*	NEMA Design	F.L. Effic. %	Current			Torque			F.L. Power Factor	Moment of Inertia (lb·ft ²)					
					Full Load Amps	Locked Rotor Amps	No Load Current	Full Load (lb·ft)	Locked Rotor	Breakdown			Pull Up				
% of F.L. Torque																	
C-face - 1800 RPM																	
MTSN-P33-3BD18R	1/3 (1/4)	1760 (1455)	B	74.0	1.5-1.4/0.7	6.5	1-1.1/0.55	1.00	300	400	300	62.00	0.06200				
MTSP-P33-3BD18R		1745 (1455)		82.5	1.4-1.2/0.6	8	x-0.78/0.39					71.00					
MTSN-P50-3BD18R	1/2 (1/3)	1745 (1450)		78.5	1.8-1.6/0.8	10	1.2-1.3/0.65	1.50	285	300	250	70.00	0.06900				
MTSP-P50-3BD18R				82.5			1.44-1.30/0.65					78.00					
MTSN-P75-3BD18R	3/4 (1/2)	1755 (1460)		81.5	2.6-2.4/1.2	12.5	1.65-1.8/0.9	2.20	2.20	320	300	69.00	0.08400				
MTSP-P75-3BD18R		1745 (1455)		82.5	2.5-2.4/1.2		2.10-1.90/0.95					78.00					
MTSN-001-3BD18R	1 (3/4)	1755 (1460)		85.5	3.3-3.1/1.55	15	1.8-2/1	3.00	300	400	290	74.00	0.13800				
MTSP-001-3BD18R		1750 (1460)					3.1-2.8/1.45					2.76-2.50/1.25		285	300	75.00	
MTSN-1P5-3BD18R	1 1/2 (1)	1755 (1460)		86.5	4.8-4.4/2.2	20	2.55-2.8/1.4	4.40	300	400	250	74.00	0.18400				
MTSN-1P5-3BD18R-14							1750 (1460)					4.1-4.0/2.0		3.32-3.00/1.50	285	300	75.00
MTSP-1P5-3BD18R																	
MTSP-1P5-3BD18R-14							2 (1 1/2)					1750 (1455)		86.5	6.2-6.0/3.0	25	3.87-3.50/1.75
MTSN-002-3BD18R	2 (1 1/2)	1750 (1455)		86.5	6-5.4/2.7	25		2.9-3.2/1.6	5.90	300	400		290				
MTSN-002-3BD18R-14																	
MTSP-002-3BD18R																	
MTSP-002-3BD18R-14																	
C-face - 3600 RPM																	
MTSP-P33-3BD36R	1/3 (1/4)	3500 (2890)	B	74.0	1.2-1.1/0.55	8	x-0.74/0.37	0.50	285	300	250	85.00	0.02700				
MTSP-P50-3BD36R	1/2 (1/3)	3460 (2900)		77.0	1.6-1.5/0.75	10	1.06-0.96/0.48	0.70				88.00	0.03600				
MTSP-P75-3BD36R	3/4 (1/2)	3500 (2890)		80.0	2.3-2.2/1.1	12.5	1.22-1.10/0.55	1.10				90.00	0.05000				
MTSP-001-3BD36R	1 (3/4)	3470 (2890)		80.0	2.9-2.8/1.4	15	1.55-1.40/0.70	1.50				90.00	0.05400				
MTSP-1P5-3BD36R	1 1/2 (1)	3480 (2900)		84.0	4.2-4.0/2.0	20	1.77-1.60/0.80	2.30				2.30	2.30	2.30	2.30	91.00	0.07200
MTSP-1P5-3BD36R-14																	
MTSP-002-3BD36R	2 (1 1/2)	3480 (2900)		85.5	4.9-4.8/2.4	25	1.92-1.74/0.87	2.90				2.90	2.90	2.90	2.90	91.00	0.09400
MTSP-002-3BD36R-14																	

*@ 60Hz (@ 50Hz)

IronHorse MTS Washdown 3-phase Motors

Wiring Diagram



Accessories



MTAS-FAN-56



MTAS-SHROUD-56140

MTSP Accessories		
Part Number	Price	Fits
Replacement Fans		
MTAS-FAN-56	\$29.00	1/3hp, 1/2hp and 3/4hp IronHorse MTS series TEFC motors
MTAS-FAN-143180	\$29.00	1hp 2- and 4-pole, 1-1/2hp 2-pole and 3hp and 5hp 4-pole IronHorse MTS series TEFC motors
MTAS-FAN-145	\$29.00	1-1/2hp 4-pole, 2hp 2- and 4-pole IronHorse MTS series TEFC motors
MTAS-FAN-180-26	\$32.00	1hp, 1-1/2hp and 2hp 6-pole and 3hp and 5hp 2-pole IronHorse MTS series TEFC motors
MTAS-FAN-210-6	\$36.00	3hp and 5hp 6-pole IronHorse MTS series TEFC motors
MTAS-FAN-210	\$36.00	7-1/2hp and 10hp IronHorse MTS series TEFC motors
MTAS-FAN-250	\$39.00	15hp and 20hp IronHorse MTS series TEFC motors
Replacement Shrouds		
MTAS-SHROUD-56140	\$97.00	56 and 140T frame IronHorse MTS series TEFC motors
MTAS-SHROUD-180	\$129.00	180T frame IronHorse MTS series TEFC motors
MTAS-SHROUD-210	\$162.00	210T frame IronHorse MTS series TEFC motors
MTAS-SHROUD-250	\$233.00	250T frame IronHorse MTS series TEFC motors

Mounting

MTSP/MTSN stainless-steel motors can be mounted in any orientation, horizontal or vertical. Ensure the T-drain plugs are installed as necessary for proper drainage.

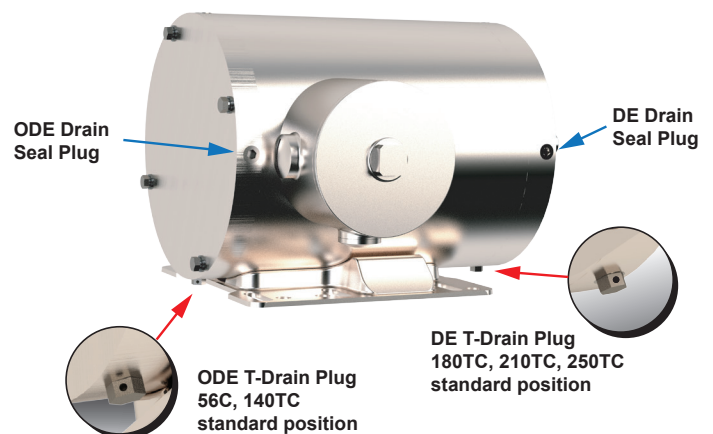
The motors have four drain holes in the 12:00, 3:00, 6:00, and 9:00 positions. Motors are shipped with one "T" shape drain plug installed as indicated below. Drain Seal plugs are installed in the other positions.

For 56C and 140TC:

- Drive End—No Drain Installed. Optional M10x1 T-Drain Plug ships with motor (install if front drain is needed).
- Opposite Drive End – M6 T-Drain Plug installed. Optional M6x1 Seal Drain Plug ships with motor (install if no drain needed).

For 180TC, 210TC, 250TC:

- Drive End—M10 x 1 T-Drain Plug installed. Optional M10 Seal Drain Plug ships with motor (install if no drain is needed).
- Opposite Drive End – No drain holes.



Premium efficiency motors for energy conservation

IronHorse® Premium Efficiency AC electric motors meet the requirements of the Energy Independence and Security Act of 2007. The MTCP2 Series gives you a low cost of entry so you get a quicker payback on your investment. All our Ironhorse motors are in stock and ready for same-day shipment; if your order is over \$49, you get free shipping too!

Cast Iron T Frame Motors 1 to 300 hp TC Frame up to 30 hp

Premium efficiency, *c*CSA_{US} certified, ISO9001, CE Mark, Standards of Excellence

All cast iron frame ribbed design for maximum cooling



IRONHORSE®
AUTOMATIONDIRECT®

Class F winding insulation

starting at
\$226.00

NSK/SKF/NTN brand premium quality ball (1-75 hp) or roller (100-300 hp) bearings

All MTCP2 models are totally enclosed fan cooled (TEFC)

Steel fan cover

Cast iron junction box with rubber gasket and rubber dust curtain

Solid (full frame length) cast iron mounting feet

Standard NEMA T frame up to 300 hp (C-flange kit optional) TC frame models (C-face) available up to 30 hp



Three-phase - 208-230/460 Volt, T Frame - TEFC Enclosure, 1200,1800, 3600 RPM

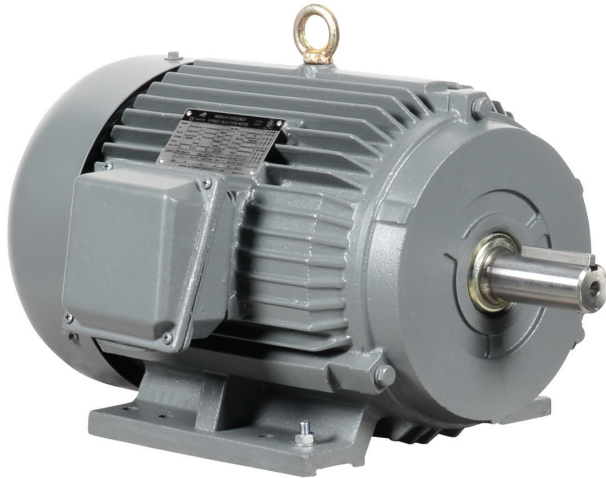
- Premium Efficiency
- Premium grade quality
- All cast iron frames
- Drive-end ball bearings (1-75 hp) or roller bearings (100-300 hp) are installed in all MTCP2 motors
- Electrically reversible
- C-flange kits for C-face mounting are available
- C-face models available up to 30 hp



MTCP2 Premium-Efficiency Cast-Iron 3-phase AC Motors

T-Frame TEFC Motors – 3-phase Industrial Duty – 1 to 300 hp

TC-Frame (C-Face) TEFC Motors – 3-phase Industrial Duty – 1 to 30 hp



**Premium Efficiency
3-phase Cast-iron T-Frame**

Features

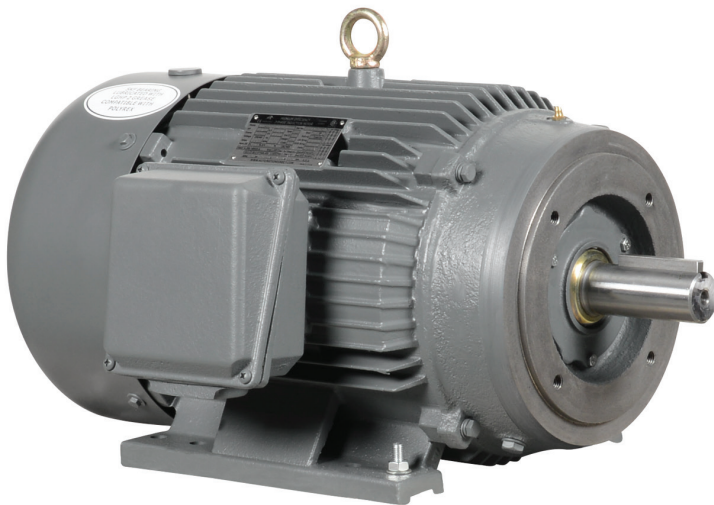
- Available in 1200, 1800, & 3600 rpm
- Totally Enclosed Fan Cooled (TEFC) enclosure
- NEMA TC-frame (C-face) and T-frame motors
- Horizontal or Vertical shaft down orientation
- Cast-iron frame with ribbed design for maximum cooling
- Solid full frame length cast-iron mounting feet
- Steel fan cover
- Cast-iron junction box with rubber gasket and rubber dust cover
- NSK/NTN/SKF brand premium quality ball (1-75 hp) or roller bearings (100-300 hp)
- Maintenance free bearings (10 hp and below)
- V-ring shaft seals on drive end and on opposite drive end
- Electrically reversible
- Class F winding insulation
- Service Factor: 1.25 (1-200 hp), 1.15 (250-300 hp), 1.0 with AC drive (ALL)
- Meets or exceeds Premium Efficiency standards
- Class I, Div 2 hazardous locations
- Inverter ratings: 20:1 (variable torque); 10:1 (constant torque)
- Two year warranty
- cCSA_{us} certified, ISO9001, CE

Accessories & Spare Parts Available

- STABLE motor slide bases for adjustable mounting
- C-flange kits (for converting T-frame motors to TC-frame)
- Replacement junction boxes
- Replacement fans
- Replacement fan shrouds

Applications

- Fans
- Conveyors
- Pumps
- Material Handling
- Metal Processing
- Textile Processing
- Test Stands



**Premium Efficiency
3-phase Cast-iron TC-Frame**



MTCP2 Premium-Efficiency Cast-Iron 3-phase AC Motors

T-Frame TEFC Motors – 3-Phase Industrial Duty – 1–300 hp – 1800 rpm

TC-Frame (C-Face) TEFC Motors – 3-Phase Industrial Duty – 1–30 hp – 1800 rpm

Motor Specifications – Premium-Efficiency MTCP2 Series 3-phase Motors – 1800 rpm													
Part Number (1)	Price	HP (2)	Base RPM @60Hz (50Hz)	Phase	Voltage	Housing	NEMA Frame	Mounting (3)	Holes / Foot	Service Factor(6) (@50Hz)	F.L. Amps @208-230V/460V	Approx Product Weight (lb) (4)	Drawing Links
MTCP2-001-3BD18	\$226.00	1	1800 (1500)	3	208-230/460V	TEFC cast-iron	143T	F1(F2)	2	1.25 (1.0)	3.61-3.27 / 1.63	41	PDF
MTCP2-001-3BD18C	\$237.00						143TC						PDF
MTCP2-1P5-3BD18	\$286.00	1.5					145T		4		4.92-4.45 / 2.22	56	PDF
MTCP2-1P5-3BD18C	\$295.00						145TC				PDF		
MTCP2-002-3BD18	\$310.00	2					145T		4		6.56-5.93 / 2.97	58.5	PDF
MTCP2-002-3BD18C	\$320.00						145TC				PDF		
MTCP2-003-3BD18	\$538.00	3					182T		2		9.01-8.16 / 4.08	86	PDF
MTCP2-003-3BD18C	\$554.00						182TC				PDF		
MTCP2-005-3BD18	\$558.00	5					184T		4		13.9-12.6 / 6.3	104	PDF
MTCP2-005-3BD18C	\$575.00						184TC				PDF		
MTCP2-7P5-3BD18	\$867.00	7.5					213T		2		20.4-18.5 / 9.23	172	PDF
MTCP2-7P5-3BD18C	\$893.00						213TC				PDF		
MTCP2-010-3BD18	\$958.00	10					215T	4	26.9-24.3 / 12.2		193	PDF	
MTCP2-010-3BD18C	\$986.00						215TC		PDF				
MTCP2-015-3BD18	\$1,321.00	15					254T	2	40.0-36.2 / 18.1		265	PDF	
MTCP2-015-3BD18C	\$1,360.00						254TC		PDF				
MTCP2-020-3BD18	\$1,540.00	20					256T	4	52.4-47.4 / 23.7		304	PDF	
MTCP2-020-3BD18C	\$1,586.00						256TC		PDF				
MTCP2-025-3BD18	\$2,128.00	25					284T	2	65.1-58.8 / 29.4		385	PDF	
MTCP2-025-3BD18C	\$2,273.00						284TC		PDF				
MTCP2-030-3BD18	\$2,253.00	30					286T	4	78.1-70.6 / 35.3		430	PDF	
MTCP2-030-3BD18C	\$2,406.00						286TC		PDF				
MTCP2-040-3BD18	\$2,774.00	40					324T	2	104-93.7 / 46.8		531	PDF	
MTCP2-050-3BD18	\$3,141.00	50					326T	4	127-115 / 57.6		578	PDF	
MTCP2-060-3BD18	\$4,172.00	60					364T	2	158-142 / 71.2		769	PDF	
MTCP2-075-3BD18	\$4,510.00	75					365T		F1		196-177 / 88.7	858	PDF
MTCP2-100-3BD18	\$5,697.00	100					405T	4	252-228 / 114		1131	PDF	
MTCP2-125-3BD18	\$6,952.00	125			444T		2	323-292 / 146	1429		PDF		
MTCP2-150-3BD18	\$8,276.00	150			445T			F1(F2)	386-349 / 175		1625	PDF	
MTCP2-200-3BD18	\$9,468.00	200			445/7T		4	506-458 / 229	2033		PDF		
MTCP2-250-3D18	\$13,867.00	250	449T	2	2805	2508	PDF						
MTCP2-300-3D18	\$17,993.00	300	449T		F1	3365	2728	PDF					

- 1) Please review the AutomationDirect Terms & Conditions for warranty and service on this product.
- 2) For warranty on motors 50 hp and above, motors must be inspected by an EASA motor repair or service center.
- 3) F1(F2) indicates F1 conduit box mounting location, field convertible to F2 (as shown on dimensional diagram).
- 4) Certain heavy and oversized items can be shipped only via LTL. Check our web site for current shipping method constraints by part number.
- 5) F.L. Amps @ 460V only.
- 6) The service factor changes from 1.25 to 1.0 under the following conditions:
 - When running the motor at 208VAC @ 60Hz
 - When running the motor at 200/400VAC @ 50Hz
 - When used with a VFD



MTCP2 Premium-Efficiency Cast-Iron 3-phase AC Motors

T-Frame TEFC Motors – 3-phase Industrial Duty – 1–20 hp – 1200 & 3600 rpm

Motor Specifications – Premium-Efficiency MTCP2 Series 3-phase Motors – 1200 rpm													
Part Number ⁽¹⁾	Price	HP	Base RPM @60Hz (50Hz)	Phase	Voltage	Housing	NEMA Frame	Mounting ⁽²⁾	Holes / Foot	Service Factor ⁽⁴⁾ (@50Hz)	F.L. Amps @208-230V/460V	Approx Product Weight (lb) ⁽³⁾	Drawing Links
MTCP2-001-3BD12	\$297.00	1	1200 (1000)	3	208-230/460V	TEFC cast-iron	145T	F1(F2)	4	1.25 (1.0)	3.86-3.49 / 1.75	53	PDF
MTCP2-1P5-3BD12	\$473.00	1.5					182T		2		5.22-4.72 / 2.36	91.5	PDF
MTCP2-002-3BD12	\$509.00	2					184T		4		6.59-5.96 / 2.98	100	PDF
MTCP2-003-3BD12	\$652.00	3					213T		2		9.92-8.97 / 4.48	166	PDF
MTCP2-005-3BD12	\$742.00	5					215T		4		16.1-14.5 / 7.27	179	PDF
MTCP2-7P5-3BD12	\$1,202.00	7.5					254T		2		20.8-18.8 / 9.41	247	PDF
MTCP2-010-3BD12	\$1,320.00	10					256T		4		27.8-25.1 / 12.5	258	PDF
MTCP2-015-3BD12	\$1,675.00	15					284T		2		42.9-38.8 / 19.4	366	PDF
MTCP2-020-3BD12	\$1,845.00	20					286T		4		56.5-51.1 / 25.5	419	PDF

1) Please review the AutomationDirect Terms & Conditions for warranty and service on this product.

2) F1(F2) indicates F1 conduit box mounting location, field convertible to F2 (as shown on dimensional diagram).

3) Certain heavy and oversized items can be shipped only via LTL. Check our web site for current shipping method constraints by part number.

4) The service factor changes from 1.25 to 1.0 under the following conditions:

- When running the motor at 208VAC @ 60Hz
- When running the motor at 200/400VAC @ 50Hz
- When used with a VFD

Motor Specifications – Premium-Efficiency MTCP2 Series 3-phase Motors – 3600 rpm													
Part Number ⁽¹⁾	Price	HP	Base RPM @60Hz (50Hz)	Phase	Voltage	Housing	NEMA Frame	Mounting ⁽²⁾	Holes / Foot	Service Factor ⁽⁴⁾ (@50Hz)	F.L. Amps @208-230V/460V	Approx Product Weight (lb) ⁽³⁾	Drawing Links
MTCP2-1P5-3BD36	\$254.00	1.5	3600 (3000)	3	208-230/460V	TEFC cast-iron	143T	F1(F2)	2	1.25 (1.0)	4.62-4.18 / 2.09	45.2	PDF
MTCP2-002-3BD36	\$274.00	2					145T		4		6.05-5.48 / 2.74	50.7	PDF
MTCP2-003-3BD36	\$384.00	3					182T	F1	2		6.45-7.64 / 3.82	80.5	PDF
MTCP2-005-3BD36	\$442.00	5					184T		4		13.3-12.0 / 6.01	96	PDF
MTCP2-7P5-3BD36	\$699.00	7.5					213T	F1(F2)	2		20.9-18.9 / 9.45	160	PDF
MTCP2-010-3BD36	\$691.00	10					215T		4		27.0-24.4 / 12.2	180	PDF
MTCP2-015-3BD36	\$1,304.00	15					254T		2		38.8-35.1 / 17.5	261	PDF
MTCP2-020-3BD36	\$1,433.00	20					256T	4	51.1-46.2 / 23.1		297	PDF	

1) Please review the AutomationDirect Terms & Conditions for warranty and service on this product.

2) F1(F2) indicates F1 conduit box mounting location, field convertible to F2 (as shown on dimensional diagram).

3) Certain heavy and oversized items can be shipped only via LTL. Check our web site for current shipping method constraints by part number.

4) The service factor changes from 1.25 to 1.0 under the following conditions:

- When running the motor at 208VAC @ 60Hz
- When running the motor at 200/400VAC @ 50Hz
- When used with a VFD



MTCP2 Premium-Efficiency Cast-Iron 3-phase AC Motors

T-Frame TEFC Motors – 3-phase Industrial Duty – 1–300 hp

TC-Frame (C-Face) TEFC Motors – 3-phase Industrial Duty – 1–30 hp

Performance Data – T & TC Frame 3-phase MTCP2 Motors (460 Volt except as indicated) – 1200, 1800, 3600 rpm

Part Number	HP	NEMA Design	FL RPM	Minimum Speed (rpm)		Current @ 230V/460V (Amps)			Torque (lb-ft)			Maximum Speed (rpm)		FL Efficiency (%)	F.L. Power Factor	Rotor Inertia (lb-ft ²)
				CT 10:1	VT 20:1	No Load	Full Load	Locked Rotor	Full Load	Locked Rotor	Break-down	CHP(1)	Safe			
MTCP2-001-3BD12	1	B	1160	116	58	2.3/1.5	3.49/1.75	30/15	4.53	8.15	12.00	1800	2400	82.5	0.65	0.118
MTCP2-001-3BD18(C)			1755	175.5	87.75	2.2/1.1	3.27/1.63	30/15	2.99	8.37	11.96	2700	3600	85.5	0.67	0.089
MTCP2-1P5-3BD12	1.5	B	1180	118	59	3.1/1.55	4.72/2.36	40/20	6.67	16.68	24.01	1800	2400	87.5	0.68	0.401
MTCP2-1P5-3BD18(C)			1755	175.5	87.75	2.9/1.45	4.45/2.22	40/20	4.49	12.57	17.51	2700	3600	86.5	0.73	0.105
MTCP2-1P5-3BD36	2	B	3490	348.5	174.25	2.1/1.05	4.18/2.09	40/20	2.26	4.97	7.01	5400	7200	84	0.80	0.043
MTCP2-002-3BD12			1175	118	59	3.7/1.85	5.96/2.98	50/25	8.9	20.47	29.37	1800	2400	88.5	0.71	0.462
MTCP2-002-3BD18(C)	2	B	1755	175.5	87.75	3.9/1.95	5.93/2.97	50/25	5.98	16.15	20.93	2700	3600	86.5	0.73	0.116
MTCP2-002-3BD36			3490	349	174.5	2.5/1.25	5.48/2.74	50/25	3.01	6.92	9.63	5400	7200	85.5	0.80	0.05
MTCP2-003-3BD12	3	B	1175	117.5	58.75	5/2.5	8.97/4.48	64/32	13.3	20.62	31.92	1800	2400	89.5	0.7	0.646
MTCP2-003-3BD18(C)			1755	175.5	87.75	4.6/2.3	8.16/4.08	64/32	9	19.80	28.80	2700	3600	89.5	0.77	0.23
MTCP2-003-3BD36	5	B	3490	350.5	175.25	3.52/1.7	7.64/3.82	64/32	4.49	9.43	15.72	5400	7200	86.5	0.85	0.133
MTCP2-005-3BD12			1175	117.5	58.75	7.1/3.55	14.5/7.27	92/46	22.2	35.52	53.28	1800	2400	89.5	0.72	0.946
MTCP2-005-3BD18(C)	5	B	1755	175.5	87.75	5.4/2.7	12.6/6.3	92/46	15	30.00	42.00	2700	3600	89.5	0.83	0.326
MTCP2-005-3BD36			3490	350.5	175.25	3.1/1.55	12.0/6.01	92/46	7.49	16.48	26.22	5400	7200	88.5	0.88	0.178
MTCP2-7P5-3BD12	7.5	B	1175	117.5	58.75	8.4/4.2	18.8/9.41	127/63.5	33.5	60.30	93.80	1800	2400	91	0.82	2.03
MTCP2-7P5-3BD18(C)			1760	176	88	8.0/4.0	18.5/9.23	127/63.5	22.3	41.26	60.21	2700	3600	91.7	0.83	0.689
MTCP2-7P5-3BD36	10	B	3505	350.5	175.25	6.4/3.2	18.9/9.45	127/63.5	11.2	17.92	33.60	5400	5400	89.5	0.83	11.2
MTCP2-010-3BD12			1175	117.5	58.75	11.6/5.8	25.1/12.5	162/81	44.7	80.46	125.16	1800	2400	91	0.82	2.27
MTCP2-010-3BD18(C)	10	B	1760	176	88	9.8/4.9	24.3/12.2	162/81	29.7	51.98	77.22	2700	3600	91.7	0.84	0.814
MTCP2-010-3BD36			3500	350	175	7.3/3.7	24.4/12.2	162/81	14.9	22.35	41.72	5400	5400	90.2	0.85	0.369
MTCP2-015-3BD12	15	B	1185	118.5	59.25	17/8.5	38.8/19.4	232/116	66.5	96.43	152.95	1800	2400	91.7	0.79	4.09
MTCP2-015-3BD18(C)			1765	176.5	88.25	15/7.5	36.2/18.1	232/116	44.6	84.74	120.42	2700	3600	92.4	0.84	1.89
MTCP2-015-3BD36	20	B	3540	354.5	177.25	9.8/4.9	35.1/17.5	232/116	22.2	37.74	55.50	5400	5400	91	0.88	1.06
MTCP2-020-3BD12			1185	118.5	59.25	49.2/24.6	51.1/25.5	290/145	88.6	124.04	194.92	1800	2400	91.7	0.80	5
MTCP2-020-3BD18(C)	20	B	1765	176.5	88.25	18/9	47.4/23.7	290/145	59.5	107.10	148.75	2700	3600	93	0.85	2.33
MTCP2-020-3BD36			3540	354	177	46.2/23.1	46.2/23.1	290/145	29.7	47.52	68.31	5400	5400	91	0.89	1.26
MTCP2-025-3BD18(C)	25	B	1770	177	88.5	21.2/10.6	58.8/29.4	365/182.5	74.2	111.30	178.08	2700	2700	93.6	0.85	3.36
MTCP2-030-3BD18(C)	30	B	1770	177	88.5	24/12	70.6/35.3	435/217.5	89	133.50	213.60	2700	2700	93.6	0.85	3.83
MTCP2-040-3BD18	40	B	1775	177.5	88.75	34/17	93.7/46.8	580/290	118	188.80	306.80	2700	2700	94.1	0.85	6.11
MTCP2-050-3BD18	50	B	1775	177.5	88.75	41/20.5	115/57.6	725/362.5	148	236.80	384.80	2700	2700	94.5	0.86	6.89
MTCP2-060-3BD18	60	B	1780	178	89	56/28	142/71.2	870/435	177	362.85	442.50	2700	2700	95	0.83	14.7
MTCP2-075-3BD18	75	B	1780	178	89	74/37	177/88.7	1085/542.5	221	397.80	508.30	2700	2700	95.4	0.83	17.5
MTCP2-100-3BD18	100	B	1785	178.5	89.25	70/35	228/114	1450/725	294	470.40	735.00	2700	2700	95.4	0.86	31.2
MTCP2-125-3BD18	125	B	1790	179	89.5	104/52	292/146	1815/907	367	587.20	880.80	2700	2700	95.4	0.84	40.1
MTCP2-150-3BD18	150	B	1790	179	89.5	113/56.5	349/175	2170/1085	440	704.00	1056.00	2700	2700	95.8	0.84	48.5
MTCP2-200-3BD18	200	B	1790	179	89.5	144/72	458/229	2900/1450	587	997.90	1467.50	2700	2250	96.2	0.85	64.3
MTCP2-250-3D18	250	B	1790	179	89.5	91.9 ²	280 ²	1825 ²	773	1546.00	2009.80	2700	2250	96.2	0.87	78.8
MTCP2-300-3D18	300	B	1790	179	89.5	103 ²	336 ²	2200 ²	880	1760.00	2200.00	2700	2250	96.2	0.87	94.1

1) Maximum Constant HP RPM is for direct coupled loads.

2) Current @460V (Amps)



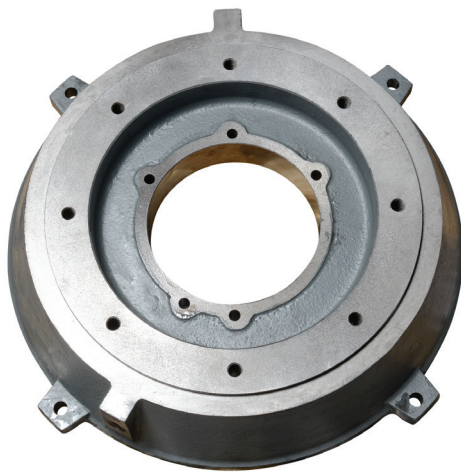
MTCP2 Premium-Efficiency Cast-Iron 3-phase AC Motors

Premium Efficiency TEFC T-Frame 3-phase Motor C-Flange Kits – 1 to 300 hp

We stock Premium Efficiency NEMA cast-iron T-frame motors from 1–300 hp, and TC-frame motors from 1–30 hp.

We also offer IronHorse cast-iron C-flange kits which can be used for C-face mounting of our 1–300 hp IronHorse MTCP2 Premium Efficiency cast-iron T-frame motors.

C-faces must be installed by an EASA motor shop in order to maintain the motor warranty.



MTCP2 Premium-Efficiency T-frame 3-phase Motor C-Flange Kits					
Part Number (1)	Price	Fits Frame	Fits Motor Number	Motor HP	Product Weight (lb) (2)
<u>MTAP2-CFACE-140TC</u>	\$29.00	143T & 145T	<u>MTCP2-001-3BD12</u> <u>MTCP2-001-3BD18</u> <u>MTCP2-1P5-3BD18</u> <u>MTCP2-1P5-3BD36</u> <u>MTCP2-002-3BD18</u> <u>MTCP2-002-3BD36</u>	1 1 1-1/2 1-1/2 2 2	5.62
<u>MTAP2-CFACE-180TC</u>	\$40.00	182T & 184T	<u>MTCP2-1P5-3BD12</u> <u>MTCP2-002-3BD12</u> <u>MTCP2-003-3BD18</u> <u>MTCP2-003-3BD36</u> <u>MTCP2-005-3BD18</u> <u>MTCP2-005-3BD36</u>	1-1/2 2 3 3 5 5	10.36
<u>MTAP2-CFACE-210TC</u>	\$56.00	213T & 215T	<u>MTCP2-003-3BD12</u> <u>MTCP2-005-3BD12</u> <u>MTCP2-7P5-3BD18</u> <u>MTCP2-7P5-3BD36</u> <u>MTCP2-010-3BD18</u> <u>MTCP2-010-3BD36</u>	3 5 7-1/2 7-1/2 10 10	12.68
<u>MTAP2-CFACE-250TC</u>	\$96.00	254T & 256T	<u>MTCP2-7P5-3BD12</u> <u>MTCP2-010-3BD12</u> <u>MTCP2-015-3BD18</u> <u>MTCP2-015-3BD36</u> <u>MTCP2-020-3BD18</u> <u>MTCP2-020-3BD36</u>	7-1/2 10 15 15 20 20	31.20
<u>MTAP2-CFACE-280TC</u>	\$122.00	284T & 286T	<u>MTCP2-015-3BD12</u> <u>MTCP2-020-3BD12</u> <u>MTCP2-025-3BD18</u> <u>MTCP2-030-3BD18</u>	15 20 25 30	31.20
<u>MTAP2-CFACE-320TC</u>	\$168.00	324T & 326T	<u>MTCP2-040-3BD18</u> <u>MTCP2-050-3BD18</u>	40 50	47.40
<u>MTAP2-CFACE-360TC</u>	\$239.00	364T & 365T	<u>MTCP2-060-3BD18</u> <u>MTCP2-075-3BD18</u>	60 75	48.70
<u>MTAP2-CFACE-400TC</u>	\$366.00	405T	<u>MTCP2-100-3BD18</u>	100	132.17
<u>MTAP2-CFACE-444TC</u>	\$389.00	444T & 445T	<u>MTCP2-125-3BD18</u> <u>MTCP2-150-3BD18</u>	125 150	137.44
<u>MTAP2-CFACE-447TC</u>	\$389.00	445/7T	<u>MTCP2-200-3BD18</u>	200	134.83
<u>MTAP2-CFACE-449TC</u>	\$839.00	449T	<u>MTCP2-250-3D18</u> <u>MTCP2-300-3D18</u>	250 300	162.50

1) Please review the AutomationDirect Terms & Conditions for warranty and service on this product.

2) Certain heavy and oversized items can be shipped only via LTL.

Check our web site for current shipping method constraints by part number.



MTCP2 Premium-Efficiency Cast-Iron 3-phase AC Motors

Premium Efficiency TEFC 3-phase Motor Replacement Parts – 1 to 300 hp

We stock MTCP2 Premium Efficiency NEMA cast-iron T-frame motors from 1–300 hp, and TC-frame motors from 1–30 hp.

We also offer IronHorse junction boxes, TEFC fans, and TEFC fan shrouds as direct replacement parts for these MTCP2 motors.

These replacement parts are field installable. Instructions included.



MTCP2 Premium-Efficiency 3-phase Motor Replacement Parts						
Part Number ⁽¹⁾	Price	Description ⁽²⁾⁽³⁾⁽⁴⁾	Fits Frame	Fits PE Motor Number ⁽¹⁾	Motor HP	Product Wt. (lb)
MTAP2-FAN-140	\$40.00	Replacement Fan	143 & 145	MTCP2-001-3BD12	1	0.029
MTAP2-SHROUD-140	\$34.00	Replacement Fan Shroud		MTCP2-001-3BD18(C)	1	1.04
MTAP2-JBOX-140	\$34.00	Replacement Junction Box		MTCP2-1P5-3BD18(C)	1-1/2	2.54
			MTCP2-1P5-3BD36	1-1/2		
				MTCP2-002-3BD18(C)	2	
				MTCP2-002-3BD36	2	
MTAP2-FAN-180	\$40.00	Replacement Fan	182 & 184	MTCP2-1P5-3BD12	1-1/2	0.053
MTAP2-SHROUD-180	\$48.00	Replacement Fan Shroud		MTCP2-002-3BD12	2	2.23
MTAP2-JBOX-180	\$49.50	Replacement Junction Box		MTCP2-003-3BD18(C)	3	3.28
			MTCP2-003-3BD36	3		
				MTCP2-005-3BD18(C)	5	
				MTCP2-005-3BD36	5	
MTAP2-FAN-210-2	\$44.50	Replacement Fan (for 2-pole motors)	213 & 215	MTCP2-7P5-3BD36	7-1/2	0.075
				MTCP2-010-3BD36	10	
MTAP2-FAN-210	\$42.50	Replacement Fan (4&6-pole)		MTCP2-003-3BD12	3	0.075
				MTCP2-005-3BD12	5	
MTAP2-SHROUD-210	\$49.50	Replacement Fan Shroud		MTCP2-7P5-3BD18(C)	7-1/2	4.98
MTAP2-JBOX-210	\$49.50	Replacement Junction Box		MTCP2-010-3BD18(C)	10	3.28
MTAP2-FAN-250-2	\$72.00	Replacement Fan (for 2-pole motors)	254 & 256	MTCP2-015-3BD36	15	0.090
				MTCP2-020-3BD36	20	
MTAP2-FAN-250	\$72.00	Replacement Fan (4&6-pole)		MTCP2-7P5-3BD12	7-1/2	0.104
				MTCP2-010-3BD12	10	
MTAP2-SHROUD-250	\$83.00	Replacement Fan Shroud		MTCP2-015-3BD18(C)	15	8.27
MTAP2-JBOX-250	\$83.00	Replacement Junction Box		MTCP2-020-3BD18(C)	20	8.16
MTAP2-FAN-280	\$99.00	Replacement Fan	284 & 286	MTCP2-015-3BD12	15	0.090
MTAP2-SHROUD-280	\$123.00	Replacement Fan Shroud		MTCP2-020-3BD12	20	10.03
MTAP2-JBOX-280	\$149.00	Replacement Junction Box		MTCP2-025-3BD18(C)	25	8.16
			MTCP2-030-3BD18(C)	30		
MTAP2-FAN-320	\$137.00	Replacement Fan	324 & 326	MTCP2-040-3BD18(C)	40	0.126
MTAP2-SHROUD-320	\$149.00	Replacement Fan Shroud		MTCP2-050-3BD18(C)	50	12.50
MTAP2-JBOX-320	\$149.00	Replacement Junction Box				23.59
MTAP2-FAN-360	\$223.00	Replacement Fan	364 & 365	MTCP2-060-3BD18(C)	60	0.126
MTAP2-SHROUD-360	\$229.00	Replacement Fan Shroud		MTCP2-075-3BD18(C)	75	13.76
MTAP2-JBOX-360	\$280.00	Replacement Junction Box				21.05
MTAP2-FAN-400	\$261.00	Replacement Fan	405			0.150
MTAP2-SHROUD-400	\$280.00	Replacement Fan Shroud		MTCP2-100-3BD18(C)	100	16.67
MTAP2-JBOX-400	\$280.00	Replacement Junction Box				32.74
MTAP2-FAN-440	\$286.00	Replacement Fan	444 & 445 & 447	MTCP2-125-3BD18	125	0.150
MTAP2-SHROUD-440	\$313.00	Replacement Fan Shroud		MTCP2-150-3BD18	150	17.97
MTAP2-JBOX-440	\$313.00	Replacement Junction Box		MTCP2-200-3BD18	200	36.49
MTAP2-FAN-449	\$419.00	Replacement Fan	449	MTCP2-250-3D18	250	0.205
MTAP2-FAN-449-1	\$415.00	Replacement Fan		MTCP2-300-3D18	300	0.174
MTAP2-JBOX-449	\$555.00	Replacement Junction Box		MTCP2-250-3D18	250	22.27
MTAP2-SHROUD-449	\$580.00	Replacement Fan Shroud		MTCP2-300-3D18	300	36.49

- 1) These MTAP2 replacement components fit only MTCP2 Premium Efficiency motors.
- 2) Replacement Fans include fan and snap ring.
- 3) Replacement Fan Shrouds include shroud, bolts w/washers, and rubber plug.
- 4) Replacement Junction Boxes include gasketed base & cover assembly, base gasket, and base bolts.



WEG Rolled Steel General Purpose 1-phase Motors

56/140 Frame TEFC Motors – 1/4HP to 3HP

Standard Features

- 120/230 Voltage, as noted
- Rated Output: 1/4 - 3 HP
- 1800, 3600 RPM
- Class F insulation
- IP55
- Frame Sizes: NEMA 56 to 143/145
- C-face footed or footless mount
- Enclosure: TEFC
- Aluminum endshields
- Internal bolts, giving a clean surface to the motor
- Double shielded ball bearings on frames 56 to 143/145
- Mounting orientation: horizontal or vertical

Advanced Features

- High starting torque – well suited for heavy starting loads
- New ventilation system improves thermal performance
- Robust foot design suitable for tougher applications
- Oversized diagonally split aluminum terminal box exceeds IP55 requirements
- Terminal box rotatable in 90° increments for flexibility during installation
- Color coded leads as standard for easy wiring
- Bearing cap as standard on flanged motors
- Motor frame painting system 500 hours salt spray resistant

Applications

Typical uses in many commercial and industrial environments such as:

- HVAC
- Conveyors
- Pumping
- Cooling Towers



.7518ES1B56CFL-S



.7518ES1B56C-S

Motor Specifications – 1-phase												
Part Number	Price	HP	Base RPM	Volts	Encl.	NEMA Frame	Service Factor	NEMA Design	Weight (lb)	Drawing Links		
Rigid Base with C-face												
.2518ES1BW56C-S	\$216.00	1/4	1800	115/208–230 VAC	TEFC	56C	1.15	N	19	PDF		
.2536ES1BW56C-S	\$210.00		3600						18	PDF		
.3318ES1BW56C-S	\$228.00	1/3	1800						21	PDF		
.3336ES1BW56C-S	\$216.00		3600						21	PDF		
.5018ES1BW56C-S	\$250.00	1/2	1800						24	PDF		
.5036ES1BW56C-S	\$235.00		3600						24	PDF		
.7518ES1B56C-S	\$278.00	3/4	1800						30	PDF		
.7536ES1B56C-S	\$265.00		3600						28	PDF		
00118ES1B56C-S	\$318.00	1	1800						L	36	PDF	
00136ES1B56C-S	\$284.00		3600						N	31	PDF	
00158ES1B56C-S	\$359.00	1 1/2	1800						56HC	L	47	PDF
00156ES1B56C-S	\$341.00		3600						56C		35	PDF
00218ES1B145TC-S	\$483.00	2	1800						143/5TC		53	PDF
00236ES1B56C-S	\$442.00		3600						56HC		41	PDF
00336ES1E145TC-S	\$644.00	3	3600	208–230/460 VAC	143/5TC	52	PDF					
C-face												
.3318ES1BW56CFL-S	\$228.00	1/3	1800	115/208–230 VAC	TEFC	56C	1.15	N	20	PDF		
.3336ES1BW56CFL-S	\$216.00		3600						19	PDF		
.5018ES1BW56CFL-S	\$250.00	1/2	1800						23	PDF		
.5036ES1BW56CFL-S	\$235.00		3600						22	PDF		
.7518ES1B56CFL-S	\$278.00	3/4	1800						29	PDF		
.7536ES1B56CFL-S	\$265.00		3600						27	PDF		
00118ES1B56CFL-S	\$318.00	1	1800						L	36	PDF	
00136ES1B56CFL-S	\$284.00		3600						N	31	PDF	
00158ES1B56CFL-S	\$359.00	1 1/2	1800						L	47	PDF	
00156ES1B56CFL-S	\$341.00		3600							36	PDF	
00236ES1B56CFL-S	\$442.00	2	3600							41	PDF	

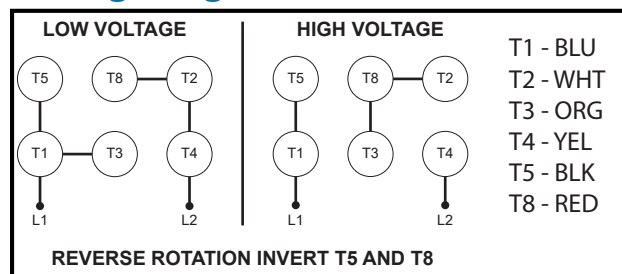
Frame 143/5C: Motor dimensions will match either 143C or 145C frame



WEG Rolled Steel General Purpose 1-phase Motors

Performance Data – 1-phase												
Part Number	HP	F.L. RPM	Volts	Current			Torque			F.L. Effic. %	F.L. Power Factor	Moment of Inertia (joules)
				No Load Current (120/230)	Full Load Amps (115/208-230)	Locked Rotor Amps (230)	Full Load (lb-ft)	Locked Rotor	Breakdown			
							% of F.L. Torque					
Rigid Base with C-face												
.2518ES1BW56C-S	1/4	1735	115/208-230 VAC	4.0/2.0	4.6/2.54-2.3	5.3	1.03	310	280	57.0	0.60	0.00134
.2536ES1BW56C-S		3485		3.2/1.6	4.2/2.32-2.1	6.6	0.51	290	300	50.0	0.74	0.00062
.3318ES1BW56C-S	1/3	1735		5.4/2.7	6.0/3.32-3.0	5.6	1.35	320	280	61.0	0.59	0.00168
.3336ES1BW56C-S		3490		3.6/1.8	5.2/2.88-2.6	7	0.67	290	290	56.5	0.74	0.00080
.5018ES1BW56C-S	1/2	1730		6.6/3.3	8.0/4.42-4.0	5.7	2.06	320	270	64.0	0.63	0.00202
.5036ES1BW56C-S		3500		4.8/2.4	7.0/3.87-3.5	8	1.02	290	300	60.0	0.76	0.00098
.7518ES1B56C-S	3/4	1745		8.0/4.0	10.6/5.86-5.3	6.4	3.06	300	270	68.5	0.67	0.00328
.7536ES1B56C-S		3500		4.0/2.0	8.0/4.42-4.0	8	1.53	280	370	66.0	0.91	0.00166
00118ES1B56C-S	1	1745		9.6/4.8	13.6/7.52-6.8	6.7	4.08		270	71.0	0.68	0.00328
00136ES1B56C-S		3500		5.5/2.75	10.1/5.64-5.06	8.4	2.04	400	70.0	0.92	0.00199	
00158ES1B56C-S	1 1/2	1745		7.8/3.9	15.0/8.27-7.48	8	6.12	250	270	77.0	0.83	0.00601
00156ES1B56C-S		3500		4.6/2.3	13.2/7.3-6.6		3.05	240	250	75.0	0.97	0.00248
00218ES1B145TC-S	2	1745	12.2/6.1	20.0/11.1-10.0	7.8	8.16	260	260	78.5	0.82	0.00680	
00236ES1B56C-S		3495	5.0/2.5	17.5/9.62-8.73		4.08	220	250	77.0	0.97	0.00298	
00336ES1E145TC-S	3	3490	208-230/460 VAC	4.0/2.0	14.0-12.7/6.35	8	6.12		210	80.0	0.94	0.00398
C-face												
.3318ES1BW56CFL-S	1/3	1735	115/208-230 VAC	5.4/2.7	6.0/3.32-3.0	5.6	1.35	320	280	61.0	0.59	0.00168
.3336ES1BW56CFL-S		3490		3.6/1.8	5.2/2.88-2.6	7	0.67	290	290	56.5	0.74	0.00080
.5018ES1BW56CFL-S	1/2	1730		6.6/3.3	8.0/4.42-4.0	5.7	2.06	320	270	64.0	0.63	0.00202
.5036ES1BW56CFL-S		3500		4.8/2.4	7.0/3.87-3.5	8	1.02	290	300	60.0	0.76	0.00098
.7518ES1B56CFL-S	3/4	1745		8.0/4.0	10.6/5.86-5.3	6.4	3.06	300	270	68.5	0.67	0.00328
.7536ES1B56CFL-S		3500		4.0/2.0	8.0/4.42-4.0	8	1.53	280	370	66.0	0.91	0.00166
00118ES1B56CFL-S	1	1745		9.6/4.8	13.6/7.52-6.8	6.7	4.08		270	71.0	0.68	0.00437
00136ES1B56CFL-S		3500		5.5/2.75	10.1/5.64-5.06	8.4	2.04	400	70.0	0.92	0.00199	
00158ES1B56CFL-S	1 1/2	1745		7.8/3.9	15.0/8.27-7.48	8	6.12	250	270	77.0	0.83	0.00601
00156ES1B56CFL-S		3500		4.6/2.3	13.2/7.3-6.6		3.05	240	250	75.0	0.97	0.00248
00236ES1B56CFL-S	2	3495		5.0/2.5	17.5/9.62-8.73	7.8	4.08	220		77.0		0.97

Wiring Diagram





WEG Rolled Steel General Purpose 3-phase Motors

56 – 256 Frame TEFC Motors – 1/4HP to 20HP

Standard Features

- 208-230/460 Voltage, as noted
- Rated Output: 1/4 - 20 HP
- 1800, 3600, 1200 RPM
- Class F insulation
- IP55
- Constant and variable torque speed ratings for inverter duty, as noted
- Frame Sizes: NEMA 56 to 256
- Rigid base, C-face footed or footless mount
- Enclosure: TEFC or TENV
- Aluminum endshields
- Certified Class I, Div 2, Groups A,B,C,D
- Internal bolts, giving a clean surface to the motor
- Double shielded ball bearings on frames 56 to 215
- Mounting orientation:
 - Cface – horizontal or vertical
 - Rigid base – horizontal only

Advanced Features

- New ventilation system improves thermal performance
- Robust foot design suitable for tougher applications
- Oversized diagonally split aluminum terminal box exceeds IP55 requirements
- Terminal box rotatable in 90° increments for flexibility during installation
- Color coded leads as standard for easy wiring
- Bearing cap as standard on flanged motors,
- Motor frame painting system 500 hours salt spray resistant



00118ET3E56CFL-S

Applications

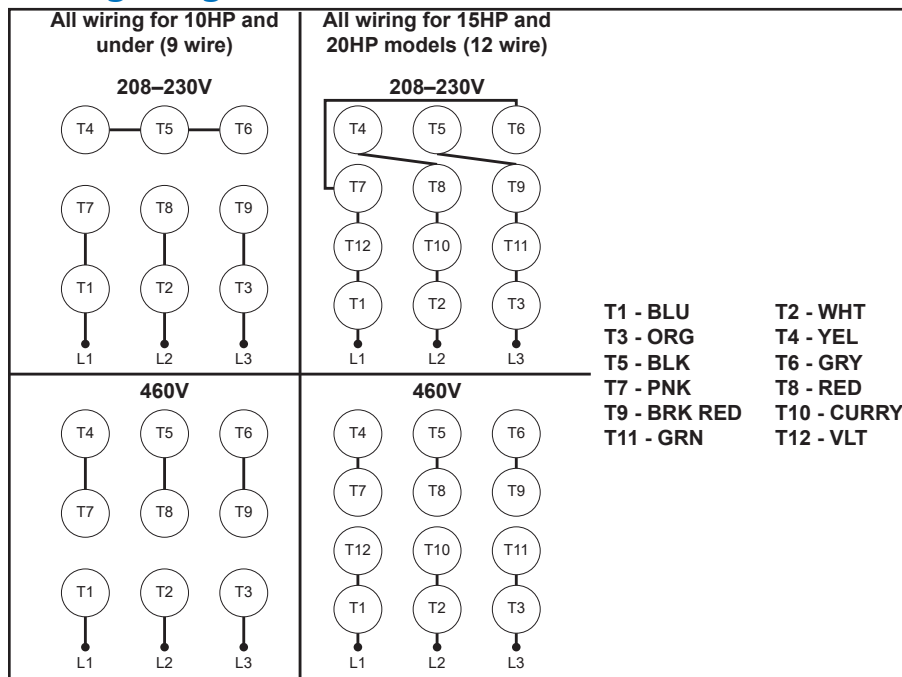
Typical uses in many commercial and industrial environments such as:

- HVAC
- Conveyors
- Pumping
- Cooling Towers



00118ET3E56C-S

Wiring Diagram



NOTE: Interchange any 2 line wires to reverse rotation



WEG Rolled Steel General Purpose 3-phase Motors

Motor Specifications – 3-phase																				
Part Number	Price	HP	Base RPM	Volts	Encl.	NEMA Frame	Service Factor*	NEMA Design	Weight (lb)	Drawing Links										
Rigid Base with C-face																				
.2518ES3E56C-S	\$203.00	1/4	1800	208-230/460 VAC	TEFC	56C	1.15	-	21	PDF										
.2536ES3E56C-S	\$194.00		3600						21	PDF										
.3318ES3E56C-S	\$206.00	1/3	1800						23	PDF										
.3336ES3E56C-S	\$203.00		3600						20	PDF										
.5018ES3E56C-S	\$234.00	1/2	1800						230/460 VAC	TENV	56CZ	1.0	24	PDF						
.5018NT3FVD56C-S	\$450.00								208-230/460 VAC	TEFC	56C	1.15	31	PDF						
.7518ES3E56C-S	\$249.00	3/4							230/460 VAC	TENV	56CZ	1.0	26	PDF						
.7518NT3FVD56C-S	\$477.00								3600	33	PDF									
.7536ES3E56C-S	\$234.00	1							1200	208-230/460 VAC	TEFC	56C	1.15	B	23	PDF				
00112ET3E56C-S	\$394.00														56HC	40	PDF			
00118ET3E56C-S	\$306.00			56C	39	PDF														
00118NT3FVD56C-S	\$511.00			230/460 VAC	TENV	56CZ	39	PDF												
00136ET3EW56C-S	\$315.00			3600	-	23	PDF													
00152ET3E182TC-S	\$518.00			1 1/2	1200	208-230/460 VAC	TEFC	182TC							1.15 1.15-1.15	B	83	PDF		
00156ET3E56C-S	\$346.00		3600		56C			35							PDF					
00158ET3E145TC-S	\$378.00		1800		143/5TC			1.15							40		PDF			
00158ET3E56C-S	\$348.00		56HC		39			PDF												
00212ET3E184TC-S	\$561.00		2		1200			184TC							1.15 1.15-1.15		92	PDF		
00218ET3E145TC-S	\$419.00	1800			143/5TC			45	PDF											
00218ET3E56C-S	\$380.00	3600	1800		208-230/460 VAC			TEFC	56HC	1.15	B	44	PDF							
00236ET3E56C-S	\$388.00											42	PDF							
00318ET3E182TC-S	\$458.00	3										1800	182TC	1.15 1.15-1.15	95		PDF			
00336ET3E145TC-S	\$506.00											3600	143/5TC	1.15	51		PDF			
00336ET3E56C-S	\$455.00	5		1200		208-230/460 VAC	TEFC					56HC	1.15	B	48	PDF				
00512ET3E215TC-S	\$905.00														215TC	155	PDF			
00518ET3E184TC-S	\$530.00														184TC	89	PDF			
00718ET3E213TC-S	\$746.00														7 1/2	1800	213TC	1.15 1.00-1.00	129	PDF
00736ET3E184TC-S	\$739.00															3600	184TC		95	PDF
01018ET3E215TC-S	\$866.00														10	1800	215TC		143	PDF
01036ET3E215TC-S	\$904.00		3600		215TC			169	PDF											
01518ET3E254TC-S	\$1,253.00		15		1800			254TC	237	PDF										
02018ET3E256TC-S	\$1,484.00		20					256TC	266	PDF										

Frame 143/5C: Motor dimensions will match either 143C or 145C frame

*Note: 1.15 SF (1.0 SF with VFD)



WEG Rolled Steel General Purpose 3-phase Motors

Motor Specifications – 3-phase											
Part Number	Price	HP	Base RPM	Volts	Encl.	NEMA Frame	Service Factor*	NEMA Design	Weight (lb)	Drawing Links	
Rigid Base											
.5018ES3E56-S	\$216.00	1/2	1800	208-230/460 VAC	TEFC	56	1.15	-	24	PDF	
.5036ES3E56-S	\$194.00		3600						22	PDF	
00118ET3E56-S	\$285.00	1	1800						38	PDF	
00218ET3E56-S	\$359.00								44	PDF	
00236ET3E145T-S	\$386.00	2	3600			42	PDF				
00518ET3E184T-S	\$504.00					5	1800	80	PDF		
00536ET3E184T-S	\$570.00	85	PDF								
01536ET3E254T-S	\$1,192.00	15	3600			197	PDF				
02036ET3E256T-S	\$1,557.00	20				227	PDF				
C-face											
.3318ES3E56CFL-S	\$206.00	1/3	1800	208-230/460 VAC	TEFC	56C	1.15	-	22	PDF	
.3336ES3E56CFL-S	\$203.00		3600						20	PDF	
.5018ES3E56CFL-S	\$234.00	1/2	1800						23	PDF	
.5036ES3E56CFL-S	\$212.00								21	PDF	
.7518ES3E56CFL-S	\$249.00	3/4	1800						25	PDF	
.7536ES3E56CFL-S	\$234.00								22	PDF	
00118ET3E56CFL-S	\$306.00	1	1800						B	38	PDF
00136ET3EW56CFL-S	\$315.00								3600	-	22
00156ET3E56CFL-S	\$346.00	1 1/2	1800			B	34	PDF			
00158ET3E56CFL-S	\$348.00						38	PDF			
00218ET3E56CFL-S	\$380.00	2	3600				42	PDF			
00236ET3E56CFL-S	\$388.00						42	PDF			
00318ET3ER182TC-S	\$458.00	3	1800			182TC	1.15 1.15-1.15	95	PDF		
00336ET3E56CFL-S	\$455.00					3600	56C	1.15	46	PDF	
00518ET3ER184TC-S	\$530.00	5	1800			184TC	1.15 1.00-1.00	90	PDF		

Frame 143/5C: Motor dimensions will match either 143C or 145C frame

*Note: 1.15 SF (1.0 SF with VFD)



WEG Rolled Steel General Purpose 3-phase Motors

Performance Data – 3-phase														
Part Number	HP	F.L. RPM	Volts	Current			Torque			Torque Speed Rating		F.L. Effic. %	F.L. Power Factor	Moment of Inertia (Joules)
				No Load Current	Full Load Amps	Locked Rotor Amps (460V)	Full Load (lb-ft)	Locked Rotor	Breakdown	Constant	Variable			
Rigid Base with C-face														
.2518ES3E56C-S	1/4	1765	208-230/460 VAC	0.776-0.9/0.45	1.15-1.04/0.521	6.3	1.01	240	300	10:1	1000:1	70.0	0.62	0.00191
.2536ES3E56C-S		3475		0.431-0.5/0.25	1.01-0.914/0.457	6.4	0.51	250				57.5	0.86	0.00164
.3318ES3E56C-S	1/3	1765		0.81-0.94/0.47	1.38-1.25/0.624	7.1	1.33	230				74.0	0.68	0.00218
.3336ES3E56C-S		3485		0.621-0.72/0.36	1.33-1.2/0.602	6.4	0.67	250				62.0	0.84	0.00164
.5018ES3E56C-S	1/2	1760		1.03-1.2/0.6	1.91-1.72/0.862	7	2.02	240				77.0	0.70	0.00246
.5018NT3FVD56C-S		1775	230/460 VAC	1.52/0.76	1.97/0.986	8.7	2.01	330	500	1000:1	0.60	0.00330		
.7518ES3E56C-S	3/4	1755	208-230/460 VAC	1.55-1.8/0.9	2.7-2.44/1.22	6.9	3.04	240	300	10:1	78.5	0.72	0.00273	
.7518NT3FVD56C-S		1770	230/460 VAC	1.82/0.91	2.61/1.30	9	3.02	350	450	1000:1	81.5	0.65	0.00380	
.7536ES3E56C-S		3475	208-230/460 VAC	0.948-1.1/0.55	2.5-2.26/1.13	7	1.54	250	290	10:1	72.0	0.85	0.00218	
00112ET3E56C-S	1	1145	230/460 VAC	1.75-2.03/1.01	3.5-3.16/1.58	5.8	6.22	230	280	5:1	1000:1	82.5	0.72	0.00673
00118ET3E56C-S		1765	230/460 VAC	1.53-1.78/0.89	3.25-2.94/1.47	8.6	4.04	280	300			85.5	0.75	0.00519
00118NT3FVD56C-S			230/460 VAC	1.78/0.89	2.94/1.47					1000:1		0.00520		
00136ET3EW56C-S		3435	208-230/460 VAC	1.38-1.6/0.798	3.32-3.0/1.5	8.8	2.07	360	380	5:1		78.5	0.80	0.00107
00152ET3E182TC-S	1	1170	208-230/460 VAC	2.35-2.73/1.36	4.91-4.44/2.22	6.9	9.12	240	340	4:1	87.5	0.71	0.01180	
00156ET3E56C-S		3520		1.48-1.72/0.859	4.14-3.74/1.87	9.1	3.04	230	300	5:1	84.0	0.88	0.00431	
00158ET3E145TC-S				1750	1.87-2.17/1.08	4.47-4.04/2.02	8.2	6.11			270	86.5	0.79	0.00464
00158ET3E56C-S		4.47-4.04/2.02												
00212ET3E184TC-S	2	1170	208-230/460 VAC	4.14-3.74/1.87	6.63-6.00/3.00	7.5	12.20	260	370	4:1	88.5	0.71	0.01440	
00218ET3E145TC-S		1745		2.41-2.8/1.4	6.02-5.44/2.72	8.2	8.16	270	300	5:1	86.5	0.80	0.00539	
00218ET3E56C-S					6.02-5.44/2.72						0.00546			
00236ET3E56C-S		3520		1.83-2.13/1.06	5.46-4.94/2.47	9.9	4.05	250	85.5	0.89	0.00539			
00318ET3E182TC-S	3	1765	208-230/460 VAC	3.45-4.00/2.00	8.43-7.62/3.81	8.8	12.10	220	380	5:1	89.5	0.81	0.01690	
00336ET3E145TC-S		3500		2.83-2.56/1.28	7.76-7.02/3.51	9.5	6.11	300			86.5	0.91	0.00701	
00336ET3E56C-S				3505	2.33-2.7/1.35	7.76-7.34/3.67	9.3	6.10			280	0.87		
00512ET3E215TC-S	5	1175	208-230/460 VAC	5.89-6.84/3.42	14.9-13.5/6.74	6	30.30	220	250	4:1	89.5	0.77	0.05310	
00518ET3E184TC-S		1750		5.94-6.89/3.44	14.4-13.0/6.49	7	20.30				0.80	0.01300		
00718ET3E213TC-S	7	1770	208-230/460 VAC	7.60-8.81/4.41	20.1-18.4/9.18	7.3	30.20	260	300	4:1	91.7	0.82	0.03950	
00736ET3E184TC-S	1/2	3480		5.24-6.07/3.04	19.0-17.1/8.57	7.7	15.30	270			360	10:1	89.5	0.90
01018ET3E215TC-S	10	1760	208-230/460 VAC	9.56-11.1/5.54	27.0-24.4/12.2	7	40.40	250	300	4:1	91.7	0.84	0.04505	
01036ET3E215TC-S		3530		6.49-7.53/3.77	25.4-23.0/11.5	7.5	20.20	260			10:1	90.2	0.91	0.03029
01518ET3E254TC-S	15	1770	208-230/460 VAC	14.9-17.3/8.65	40.3-36.4/18.2	6.5	60.30	250	300	4:1	92.4	0.82	0.09040	
02018ET3E256TC-S	20	1765		19.2-22.2/11.1	54.6-49.4/24.7	6.7	80.60	270			93.0	0.82	0.11130	



WEG Rolled Steel General Purpose 3-phase Motors

Performance Data – 3-phase																	
Part Number	HP	F.L. RPM	Volts	Current			Torque		Torque Speed Rating		F.L. Effic. %	F.L. Power Factor	Moment of Inertia (joules)				
				No Load Current	Full Load Amps	Locked Rotor Amps (460V)	Full Load (lb-ft)	Locked Rotor	Breakdown	Constant				Variable			
								% of F.L. Torque									
Rigid Base																	
.5018ES3E56-S	1/2	1760	208- 230/460 VAC	1.03-1.2/0.6	1.91-1.72/0.862	7	2.02	240	300	10:1	1000:1	77.0	0.70	0.00246			
.5036ES3E56-S		3500		0.776-0.9/0.45	1.86-1.69/0.843		1.02	260				68.0	0.81	0.00191			
00118ET3E56-S	1	1765		1.53-1.78/0.89	3.25-2.94/1.47	8.6	4.04	280		5:1		85.5	0.75	0.00519			
00218ET3E56-S	2	1745		2.41-2.8/1.4	6.02-5.44/2.72	8.2	8.16	270				86.5	0.80	0.00546			
00236ET3E145T-S		3520		1.83-2.13/1.06	5.46-4.94/2.47	9.9	4.05	250		4:1		85.5	0.89	0.00539			
00518ET3E184T-S	5	1750		5.94-6.89/3.44	14.4-13.0/6.49	7	20.30	220				10:1	89.5	0.80	0.01300		
00536ET3E184T-S		3500		3.80-4.40/2.20	13.1-11.8/5.90	7.8	10.20			88.5			0.89	0.00880			
01536ET3E254T-S	15	3525		11.2-13.0/6.50	38.5-34.8/17.4	6.8	30.30	200		10:1		91.0	0.87	0.36700			
02036ET3E256T-S	20	3515		11.9-13.8/6.88	50.2-45.4/22.7	6.6	40.50								290	0.91	0.05140
C-face																	
.3318ES3E56CFL-S	1/3	1765	208- 230/460 VAC	0.81-0.94/0.47	1.38-1.25/0.624	7.1	1.33	230	300	10:1	1000:1	74.0	0.68	0.00218			
.3336ES3E56CFL-S		3485		0.621-0.72/0.36	1.33-1.2/0.602	6.4	0.67	250				62.0	0.84	0.00164			
.5018ES3E56CFL-S	1/2	1760		1.03-1.2/0.6	1.91-1.72/0.862	7	2.02	240				300	10:1	77.0	0.70	0.00246	
.5036ES3E56CFL-S		3500		0.776-0.9/0.45	1.86-1.69/0.843		1.02	260						68.0	0.81	0.00191	
.7518ES3E56CFL-S	3/4	1755		1.55-1.8/0.9	2.7-2.44/1.22	6.9	3.04	240				290	10:1	1000:1	78.5	0.72	0.00273
.7536ES3E56CFL-S		3475		0.948-1.1/0.55	2.5-2.26/1.13	7	1.54	250							72.0	0.85	0.00218
00118ET3E56CFL-S	1	1765		1.53-1.78/0.89	3.25-2.94/1.47	8.6	4.04	280				300	5:1	1000:1	85.5	0.75	0.00519
00136ET3EW56CFL-S		3435		1.38-1.6/0.798	3.32-3.0/1.5	8.8	2.07	360				380			78.5	0.80	0.00107
00156ET3E56CFL-S	1	3520		1.48-1.72/0.859	4.14-3.74/1.87	9.1	3.04	230				300	5:1	1000:1	84.0	0.88	0.00431
00158ET3E56CFL-S	1/2	1750		1.87-2.17/1.08	4.47-4.04/2.02	8.2	6.11	270							86.5	0.79	0.00464
00218ET3E56CFL-S	2	1745	2.41-2.8/1.4	6.02-5.44/2.72	8.16		8.16		270	300	86.5	0.80	0.00546				
00236ET3E56CFL-S		3520	1.83-2.13/1.06	5.46-4.94/2.47	9.9	4.05	250	300	5:1	1000:1	85.5	0.89	0.00539				
00318ET3ER182TC-S	3	1765	3.45-4.00/2.00	8.43-7.62/3.81	8.8	12.10	220				380	4:1	89.5	0.81	0.01690		
00336ET3E56CFL-S	5	3505	2.33-2.7/1.35	7.76-7.34/3.67	9.3	6.10	280	380	5:1	86.5	0.87	0.00701					
00518ET3ER184TC-S		1750	5.94-6.89/3.44	14.4-13.0/6.49	7	20.30	220	300	4:1	89.5	0.80	0.01300					



WEG Rolled Steel General Purpose 3-phase Motors

Alternate Performance Data (50Hz) – 3-phase							
Part Number	F.L. RPM (380-415)	Volts	Current			F.L. Power Factor	
			No Load Current	Full Load Amps	Locked Rotor Amps (380-415)		
Rigid Base with C-face							
<u>.2518ES3E56C-S</u>	1455-1465	190-220/380-415 VAC	0.844-0.919/0.422-0.487	1.13-1.1/0.564-0.585	5.3-5.7	0.7-0.63	
<u>.2536ES3E56C-S</u>	2860-2885		0.42-0.441/0.21-0.234	0.938-0.832/0.469-0.441	5.4-6.3	0.9-0.87	
<u>.3318ES3E56C-S</u>	1455-1465		0.924-1.01/0.462-0.534	1.36-1.3/0.678-0.69	5.6-6.1	0.76-0.69	
<u>.3336ES3E56C-S</u>	2850-2880		0.586-0.658/0.293-0.349	1.27-1.14/0.635-0.604	5.3-6.1	0.89-0.85	
<u>.5018ES3E56C-S</u>	1445-1460		1.24-1.39/0.618-0.737	1.9-1.81/0.95-0.962	5.8-6.3	0.78-0.71	
<u>.7518ES3E56C-S</u>	1440-1450		1.71-2.06/0.856-1.09	2.74-2.6/1.37-1.38	5.6-6.2	0.8-0.73	
<u>.7536ES3E56C-S</u>	2825-2860		1.05-1.25/0.526-0.665	2.52-2.26/1.26-1.2	5.5-6.3	0.91-0.86	
<u>00112ET3E56C-S</u>	915-935		2.0-2.14/1.0-1.13	3.74-3.36/1.87-1.78	4.4-5.2	0.79-0.74	
<u>00118ET3E56C-S</u>	1450-1460		1.76-1.86/0.879-0.988	3.4-3.06/1.7-1.62	6.5-7.5	0.81-0.77	
<u>00136ET3EW56C-S</u>	2770-2815		1.56-1.79/0.781-0.949	3.4-3.11/1.7-1.65	6.5-7.5	0.86-0.8	
<u>00152ET3E182TC-S</u>	955-965		2.69-2.90/1.35-1.54	5.18-4.70/2.59-2.49	5.7-6.6	0.76-0.72	
<u>00156ET3E56C-S</u>	2895-2915		1.69-1.83/0.845-0.971	4.44-3.9/2.22-2.07	7.2-8.5	0.91-0.88	
<u>00158ET3E145TC-S</u>	1420-1435		2.13-2.37/1.07-1.26	4.82-4.28/2.41-2.27	6.1-7.2	0.84-0.8	
<u>00158ET3E56C-S</u>	1420-1435			4.82-4.28/2.41-2.27			
<u>00212ET3E184TC-S</u>	955-965		3.69-4.05/1.85-2.15	7.00-6.43/3.50-3.41	6.1-7.1	0.76-0.71	
<u>00218ET3E145TC-S</u>	1415-1435		2.75-3.09/1.37-1.64	6.5-5.79/3.25-3.07	6.0-7.1	0.85-0.81	
<u>00218ET3E56C-S</u>	1415-1435			6.5-5.79/3.25-3.07			
<u>00236ET3E56C-S</u>	2875-2900		2.1-2.27/1.05-1.2	5.94-5.23/2.97-2.77	7.4-8.8	0.92-0.89	
<u>00318ET3E182TC-S</u>	1455-1465		3.95-4.22/1.97-2.24	9.08-8.15/4.54-4.32	6.7-8.0	0.85-0.81	
<u>00336ET3E145TC-S</u>	2870-2895		2.52-2.72/1.26-1.44	8.5-7.38/4.25-3.91	7.4-8.9	0.93-0.91	
<u>00336ET3E56C-S</u>	2870-2895		2.66-2.91/1.33-1.54	8.88-7.72/4.44-4.09	7.7-9.0	0.89-0.87	
<u>00512ET3E215TC-S</u>	960-965		6.75-7.29/3.38-3.86	16.3-14.3/8.13-7.60	4.6-5.6	0.81-0.78	
<u>00518ET3E184TC-S</u>	1425-1440		6.74-7.85/3.37-4.16	15.8-14.1/7.88-7.47	5.8-6.8	0.84-0.80	
<u>00718ET3E213TC-S</u>	1455-1465		8.65-9.60/4.33-5.09	22.0-19.4/11.0-10.3	6.2-7.3	0.86-0.83	
<u>00736ET3E184TC-S</u>	2895-2910		5.98-6.70/2.99-3.55	15.3-13.8/7.65-7.29	8.4-9.4	0.89-0.85	
<u>01018ET3E215TC-S</u>	1465-1470		10.9-12.1/5.46-6.43	22.4-20.6/11.2-10.9	7.6-8.7	0.83-0.78	
<u>01036ET3E215TC-S</u>	2900-2920		7.43-7.93/3.71-4.20	28.4-24.3/14.2-12.9	6.1-7.4	0.92-0.91	
<u>01518ET3E254TC-S</u>	1455-1465		17.1-18.6/8.53-9.86	43.8-38.9/21.9-20.6	5.5-6.5	0.85-0.82	
<u>02018ET3E256TC-S</u>	1470-1475		21.9-24.1/10.9-12.8	44.4-40.7/22.2-21.6	7.4-8.5	0.82-0.77	



WEG Rolled Steel General Purpose 3-phase Motors

Alternate Performance Data (50Hz) – 3-phase						
Part Number	FL RPM (380-415)	Volts	Current			F.L. Power Factor
			No Load Current	Full Load Amps	Locked Rotor Amps (380-415)	
Rigid Base						
.5018ES3E56-S	1445-1460	190-220/380-415 VAC	1.24-1.39/0.618-0.737	1.9-1.81/0.95-0.962	5.8-6.3	0.78-0.71
.5036ES3E56-S	2865-2890		0.874-1.05/0.437-0.558	1.78-1.66/0.89-0.878	6.0-6.7	0.88-0.82
00118ET3E56-S	1450-1460		1.76-1.86/0.879-0.988	3.4-3.06/1.7-1.62	6.5-7.5	0.81-0.77
00218ET3E56-S	1415-1435		2.75-3.09/1.37-1.64	6.5-5.79/3.25-3.07	6.0-7.1	0.85-0.81
00236ET3E145T-S	2875-2900		2.1-2.27/1.05-1.2	5.94-5.23/2.97-2.77	7.4-8.8	0.92-0.89
00518ET3E184T-S	1425-1440		6.74-7.85/3.37-4.16	15.8-14.1/7.88-7.47	5.8-6.8	0.84-0.80
00536ET3E184T-S	2860-2885		4.34-4.63/2.17-2.45	14.3-12.4/7.17-6.59	6.4-7.7	0.92-0.90
01536ET3E254T-S	2920-2935		13.6-14.8/6.80-7.86	35.4-31.3/17.7-16.6	6.9-8.1	0.84-0.79
02036ET3E256T-S	2925-2940		13.6-14.4/6.79-7.66	40.8-35.8/20.4-19.0	7.4-8.7	0.90-0.88
C-face						
.3318ES3E56CFL-S	1455-1465	190-220/380-415 VAC	0.924-1.01/0.462-0.534	1.36-1.3/0.678-0.69	5.6-6.1	0.76-0.69
.3336ES3E56CFL-S	2850-2880		0.586-0.658/0.293-0.349	1.27-1.14/0.635-0.604	5.3-6.1	0.89-0.85
.5018ES3E56CFL-S	1445-1460		1.24-1.39/0.618-0.737	1.9-1.81/0.95-0.962	5.8-6.3	0.78-0.71
.5036ES3E56CFL-S	2865-2890		0.874-1.05/0.437-0.558	1.78-1.66/0.89-0.878	6.0-6.7	0.88-0.82
.7518ES3E56CFL-S	1440-1450		1.71-2.06/0.856-1.09	2.74-2.6/1.37-1.38	5.6-6.2	0.8-0.73
.7536ES3E56CFL-S	2825-2860		1.05-1.25/0.526-0.665	2.52-2.26/1.26-1.2	5.5-6.3	0.91-0.86
00118ET3E56CFL-S	1450-1460		1.76-1.86/0.879-0.988	3.4-3.06/1.7-1.62	6.5-7.5	0.81-0.77
00136ET3EW56CFL-S	2770-2815		1.56-1.79/0.781-0.949	3.4-3.11/1.7-1.65		0.86-0.8
00156ET3E56CFL-S	2895-2915		1.69-1.83/0.845-0.971	4.44-3.9/2.22-2.07	7.2-8.5	0.91-0.88
00158ET3E56CFL-S	1420-1435		2.13-2.37/1.07-1.26	4.82-4.28/2.41-2.27	6.1-7.2	0.84-0.8
00218ET3E56CFL-S	1415-1435		2.75-3.09/1.37-1.64	6.5-5.79/3.25-3.07	6.0-7.1	0.85-0.81
00236ET3E56CFL-S	2875-2900		2.1-2.27/1.05-1.2	5.94-5.23/2.97-2.77	7.4-8.8	0.92-0.89
00318ET3ER182TC-S	1455-1465		3.95-4.22/1.97-2.24	9.08-8.15/4.54-4.32	6.7-8.0	0.85-0.81
00336ET3E56CFL-S	2870-2895		2.66-2.91/1.33-1.54	8.88-7.72/4.44-4.09	7.7-9.0	0.89-0.87
00518ET3ER184TC-S	1425-1440		6.74-7.85/3.37-4.16	15.8-14.1/7.88-7.47	5.8-6.8	0.84-0.80



WEG Rolled Steel General Purpose 3-phase Brake Motors

56/256 Frame TEFC Brake Motors – 1/4HP to 20HP

Standard Features

- 208-230/460 Voltage, as noted
- Spring set, solenoid actuated AC Brake – 208-230/460V
- Rated Output: 1/4 - 20 HP
- 1800 RPM
- Manual release brake lever
- Class F insulation
- Constant and variable torque speed ratings for inverter duty, as noted
- Frame Sizes: NEMA 56 to 256
- C-face footed, rigid, or footless mount
- Enclosure: TEFC, IP55
- Aluminum endshields
- Internal bolts, giving a clean surface to the motor
- Double shielded ball bearings on frames 56 to 215
- Mounting orientation:
 - C-face – horizontal or vertical
 - Rigid base – horizontal only

Advanced Features

- New ventilation system improves thermal performance
- Robust foot design suitable for tougher applications
- Oversized diagonally split aluminum terminal box exceeds IP55 requirements
- Terminal box rotatable in 90° increments for flexibility during installation
- Color coded leads as standard for easy wiring
- Bearing cap as standard on flanged motors
- Motor frame painting system 500 hours salt spray resistant

Applications

- Conveyors
- Door Operators
- Packaging Equipment
- Unit Handling



00118ET3EBM56CFL-S



00158ET3EBM145TC-S

Motor Specifications – 3-phase													
Part Number	Price	HP	Base RPM	Volts	Encl.	NEMA Frame	Service Factor*	NEMA Design	Weight (lb)	Drawing Links			
Rigid Base with C-face													
00118ET3EBM56C-S	\$1,157.00	1	1800	208-230/460 VAC	TEFC	56C	1.15	B	50	PDF			
00158ET3EBM145TC-S	\$1,428.00	1 1/2				143/5TC			51	PDF			
00218ET3EBM145TC-S	\$1,470.00	2				182TC			54	PDF			
00318ET3EBM182TC-S	\$1,642.00	3				184TC	104		PDF				
00518ET3EBM184TC-S	\$1,923.00	5				213TC	101		PDF				
00718ET3EBM213TC-S	\$3,527.00	7 1/2				215TC	157		PDF				
01018ET3EBM215TC-S	\$3,846.00	10					171		PDF				
Rigid Base													
.3318ES3EBMW56-S	\$733.00	1/3	1800	208-230/460 VAC	TEFC	56	1.15	-	26	PDF			
.5018ES3EBMW56-S	\$829.00	1/2							26	PDF			
.7518ES3EBMW56-S	\$976.00	3/4							30	PDF			
00118ET3EBM56-S	\$1,128.00	1				254T	1.15 1.00-1.00		B	48	PDF		
01518ET3EBM254T-S	\$5,239.00	15								259	PDF		
02018ET3EBM256T-S	\$6,810.00	20								289	PDF		
C-face													
.2518ES3EBMW56CFL-S	\$725.00	1/4	1800	208-230/460 VAC	TEFC	56C	1.15	-	24	PDF			
.3318ES3EBMW56CFL-S	\$762.00	1/3							25	PDF			
.5018ES3EBMW56CFL-S	\$858.00	1/2							28	PDF			
.7518ES3EBMW56CFL-S	\$1,005.00	3/4							30	PDF			
00118ET3EBM56CFL-S	\$1,157.00	1							46	PDF			
00158ET3EBM56CFL-S	\$1,392.00	1 1/2				184TC	1.15 1.15-1.15				B	49	PDF
00218ET3EBM56CFL-S	\$1,444.00	2										53	PDF
00518ET3EBMR184TC-S	\$1,923.00	5										99	PDF
01018ET3EBMR215TC-S	\$3,846.00	10										215TC	168

Frame 143/5C: Motor dimensions will match either 143C or 145C frame

*Note: 1.15 SF (1.0 SF with VFD)



WEG Rolled Steel General Purpose 3-phase Brake Motors

Performance Data – 3-phase																
Part Number	HP	F.L. RPM	Volts	Current			Torque			Torque Speed Rating		F.L. Effic. %	F.L. Power Factor	Moment of Inertia (joules)		
				No Load Current	Full Load Amps	Locked Rotor Amps (460V)	Full Load (lb-ft)	Locked Rotor	Breakdown	Constant	Variable					
								% of F.L. Torque								
Rigid Base with C-face																
00118ET3EBM56C-S	1	1765	208-230/460 VAC	1.53-1.78/0.89	3.25-2.94/1.47	8.6	4.04	280	300	5:1	1000:1	85.5	0.75	0.00519		
00158ET3EBM145TC-S	1 1/2	1750		1.87-2.17/1.08	4.47-4.04/2.02	8.2	6.11	270				86.5	0.79	0.00431		
00218ET3EBM145TC-S	2	1745		2.41-2.8/1.4	6.02-5.44/2.72		8.16					89.5	0.80	0.00539		
00318ET3EBM182TC-S	3	1765		3.45-4.00/2.00	8.43-7.62/3.81	8.8	12.10	220				89.5	0.81	0.01690		
00518ET3EBM184TC-S	5	1750		5.94-6.89/3.44	14.4-13.0/6.49	7	20.30					89.5	0.80	0.01300		
00718ET3EBM213TC-S	7 1/2	1770		7.60-8.81/4.41	20.1-18.4/9.18	7.3	30.20	260				91.7	0.82	0.03950		
01018ET3EBM215TC-S	10	1760		9.56-11.1/5.54	27.0-24.4/12.2	7	40.40	250					0.84	0.04505		
Rigid Base																
.3318ES3EBMW56-S	1/3	1730	208-230/460 VAC	0.919-1.07/0.533	1.46-1.32/0.659	5.4	1.36	230	270	10:1	1000:1	68.0	0.70	0.00134		
.5018ES3EBMW56-S	1/2			1.2-1.4/0.698	1.98-1.79/0.896	6	2.06	260	280			72.0	0.72	0.00168		
.7518ES3EBMW56-S	3/4			1.54-1.78/0.892	2.7-2.44/1.22	6.5	3.09	270	290			75.5	0.75	0.00202		
00118ET3EBM56-S	1			1765	1.53-1.78/0.89	3.25-2.94/1.47	8.6	4.04	280			300	5:1	85.5	0.75	0.00519
01518ET3EBM254T-S	15			1770	14.9-17.3/8.65	40.3-36.4/18.2	6.5	60.30	250				4:1	92.4	0.82	0.09040
02018ET3EBM256T-S	20			1765	19.2-22.2/11.1	54.6-49.4/24.7	6.7	80.60	270			93.0	0.82	0.11130		
C-face																
.2518ES3EBMW56CFL-S	1/4	1735	208-230/460 VAC	0.716-0.83/0.415	1.11-1.01/0.503	5.3	1.03	240	290	10:1	1000:1	66.0	0.68	0.00118		
.3318ES3EBMW56CFL-S	1/3	1730		0.919-1.07/0.533	1.46-1.32/0.659	5.4	1.36	230	270			68.0	0.70	0.00134		
.5018ES3EBMW56CFL-S	1/2			1.2-1.4/0.698	1.98-1.79/0.896	6	2.06	260	280			72.0	0.72	0.00168		
.7518ES3EBMW56CFL-S	3/4			1.54-1.78/0.892	2.7-2.44/1.22	6.5	3.09	270	290			75.5	0.75	0.00202		
00118ET3EBM56CFL-S	1	1765		1.53-1.78/0.89	3.25-2.94/1.47	8.6	4.04	280	300			5:1	85.5	0.75	0.00519	
00158ET3EBM56CFL-S	1 1/2	1750		1.87-2.17/1.08	4.47-4.04/2.02	8.2	6.11	270				85.5	0.79	0.00464		
00218ET3EBM56CFL-S	2	1745		2.41-2.80/1.40	6.02-5.44/2.72		8.16		86.5			0.80	0.00550			
00518ET3EBMR184TC-S	5	1750		5.94-6.89/3.44	14.4-13.0/6.49	7	20.30	220	89.5			0.80	0.01300			
01018ET3EBMR215TC-S	10	1760		9.56-11.1/5.54	27.0-24.4/12.2		40.40	250	91.7			0.84	0.04505			



WEG Rolled Steel General Purpose 3-phase Brake Motors

Brake Performance Data – 3-phase				
Part Number	HP	Brake Voltage	Brake Torque (lb·ft)	Brake Manual Release
Rigid Base with C-face				
<u>00118ET3EBM56C-S</u>	1	208-230/460 VAC	5.9	Yes
<u>00158ET3EBM145TC-S</u>	1 1/2		10.3	
<u>00218ET3EBM145TC-S</u>	2		15	
<u>00318ET3EBM182TC-S</u>	3		25	
<u>00518ET3EBM184TC-S</u>	5		35	
<u>00718ET3EBM213TC-S</u>	7 1/2		50	
<u>01018ET3EBM215TC-S</u>	10			
Rigid Base				
<u>.3318ES3EBMW56-S</u>	1/3	208-230/460 VAC	2.95	Yes
<u>.5018ES3EBMW56-S</u>	1/2		5.9	
<u>.7518ES3EBMW56-S</u>	3/4		75	
<u>00118ET3EBM56-S</u>	1		105	
<u>01518ET3EBM254T-S</u>	15			
<u>02018ET3EBM256T-S</u>	20			
C-face				
<u>.2518ES3EBMW56CFL-S</u>	1/4	208-230/460 VAC	2.95	Yes
<u>.3318ES3EBMW56CFL-S</u>	1/3		5.9	
<u>.5018ES3EBMW56CFL-S</u>	1/2		10.3	
<u>.7518ES3EBMW56CFL-S</u>	3/4		10	
<u>00118ET3EBM56CFL-S</u>	1		25	
<u>00158ET3EBM56CFL-S</u>	1 1/2		50	
<u>00218ET3EBM56CFL-S</u>	2			
<u>00518ET3EBMR184TC-S</u>	5			
<u>01018ET3EBMR215TC-S</u>	10			



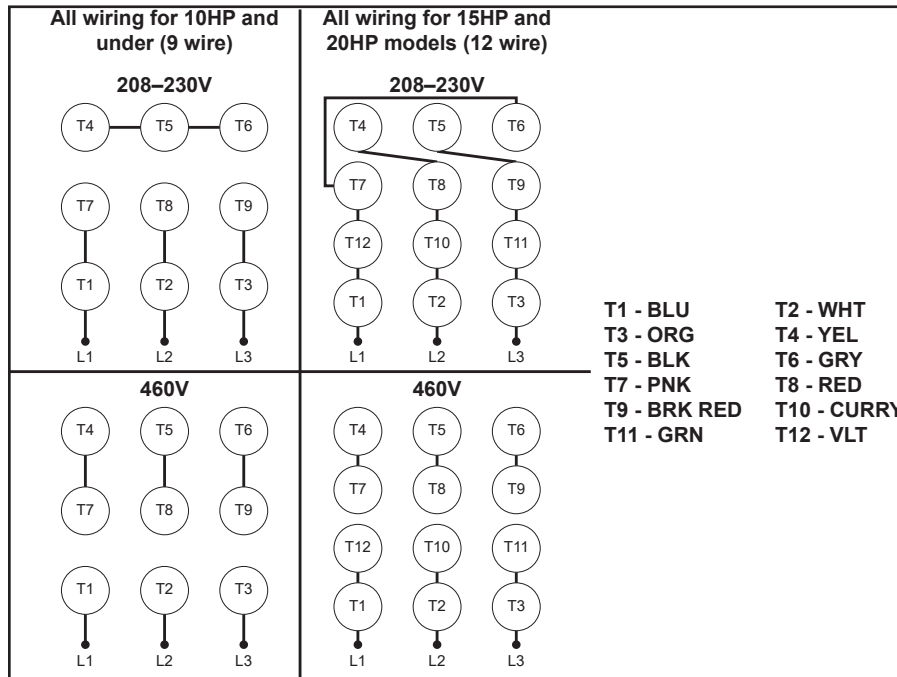
WEG Rolled Steel General Purpose 3-phase Brake Motors

Alternate Performance Data (50Hz) – 3-phase						
Part Number	F.L. RPM (380-415)	Volts	Current			F.L. Power Factor
			No Load Current	Full Load Amps	Locked Rotor Amps (380-415)	
C-face						
<u>.2518ES3EBMW56CFL-S</u>	1410-1430	190-220/380-415 VAC	0.812-0.907/0.406-0.481	1.11-1.07/0.554-0.567	4.4-4.7	0.76-0.69
<u>.3318ES3EBMW56CFL-S</u>	1400-1420		1.04-1.18/0.519-0.625	1.46-1.4/0.73-0.744	4.1-4.4	0.8-0.73
<u>.5018ES3EBMW56CFL-S</u>			1.36-1.57/0.682-0.83	2.04-1.98/1.02-1.05	4.7-5.1	0.81-0.73
<u>.7518ES3EBMW56CFL-S</u>	1395-1415		1.73-2.09/0.866-1.11	2.84-2.68/1.42-1.42	5.0-5.5	0.83-0.76
<u>00118ET3EBM56CFL-S</u>	1450-1460		1.76-1.86/0.879-0.988	3.4-3.06/1.7-1.62	6.5-7.5	0.81-0.77
<u>00158ET3EBM56CFL-S</u>	1420-1435		2.13-2.37/1.07-1.26	4.82-4.28/2.41-2.27	6.1-7.2	0.84-0.80
<u>00218ET3EBM56CFL-S</u>	1415-1435		2.75-3.09/1.37-1.64	6.50-5.79/3.25-3.07	6.0-7.1	0.85-0.81
<u>00518ET3EBMR184TC-S</u>	1425-1440		6.74-7.85/3.37-4.16	15.8-14.1/7.88-7.47	5.8-6.8	0.84-0.80
<u>01018ET3EBMR215TC-S</u>	1465-1470		10.9-12.1/5.46-6.43	22.4-20.6/11.2-10.9	7.6-8.7	0.83-0.78
Rigid Base with C-face						
<u>00118ET3EBM56C-S</u>	1450-1460	190-220/380-415 VAC	1.76-1.86/0.879-0.988	3.4-3.06/1.7-1.62	6.5-7.5	0.81-0.77
<u>00158ET3EBM145TC-S</u>	1420-1435		2.13-2.37/1.07-1.26	4.82-4.28/2.41-2.27	6.1-7.2	0.84-0.8
<u>00218ET3EBM145TC-S</u>	1415-1435		2.75-3.09/1.37-1.64	6.5-5.79/3.25-3.07	6.0-7.1	0.85-0.81
<u>00318ET3EBM182TC-S</u>	1455-1465		3.95-4.22/1.97-2.24	9.08-8.15/4.54-4.32	6.7-8.0	
<u>00518ET3EBM184TC-S</u>	1425-1440		6.74-7.85/3.37-4.16	15.8-14.1/7.88-7.47	5.8-6.8	0.84-0.80
<u>00718ET3EBM213TC-S</u>	1455-1465		8.65-9.60/4.33-5.09	22.0-19.4/11.0-10.3	6.2-7.3	0.86-0.83
<u>01018ET3EBM215TC-S</u>	1465-1470		10.9-12.1/5.46-6.43	22.4-20.6/11.2-10.9	7.6-8.7	0.83-0.78
Rigid Base						
<u>.3318ES3EBMW56-S</u>	1400-1420	190-220/380-415 VAC	1.04-1.18/0.519-0.625	1.46-1.4/0.73-0.744	4.1-4.4	0.8-0.73
<u>.5018ES3EBMW56-S</u>			1.36-1.57/0.682-0.83	2.04-1.98/1.02-1.05	4.7-5.1	0.81-0.73
<u>.7518ES3EBMW56-S</u>	1395-1415		1.73-2.09/0.866-1.11	2.84-2.68/1.42-1.42	5.0-5.5	0.83-0.76
<u>00118ET3EBM56-S</u>	1450-1460		1.76-1.86/0.879-0.988	3.4-3.06/1.7-1.62	6.5-7.5	0.81-0.77
<u>01518ET3EBM254T-S</u>	1455-1465		17.1-18.6/8.53-9.86	43.8-38.9/21.9-20.6	5.5-6.5	0.85-0.82
<u>02018ET3EBM256T-S</u>	1470-1475		21.9-24.1/10.9-12.8	44.4-40.7/22.2-21.6	7.4-8.5	0.82-0.77



WEG Rolled Steel General Purpose 3-phase Brake Motors

Motor Wiring



NOTE: Interchange any 2 line wires to reverse rotation

Brake Wiring

Low Voltage (208-230V)

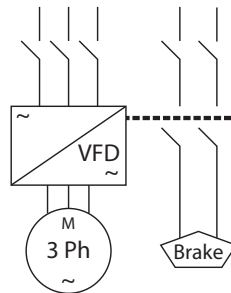
- Join B1 & B3 to Line1
- Join B2 & B4 to Line2

High Voltage (460V)

- B1 to Line1
- B2 to Line2
- B3 & B4: Wire nut together



NOTE: Brake must be wired separately when the motor is VFD operated. Brake requires full line voltage, 208-230 or 460V



Motor and brake connection for VFD

Regal AC Motor Selection – Marathon® & Leeson® 1-phase Motors



marathon®
Motors

Regal 1-phase Motor Selection					
Series	SST Duck	White Duck	JetPump	General Purpose	Fan & Blower
Electrical Characteristics					
Brand	Leeson®	Leeson®	Marathon	Marathon	Marathon
Horsepower range	1/3 – 1	1/3 – 1	1/3 – 2	1/4 – 10	1/4 – 2
Base speed (# poles)	1800 (4)	1800 (4) / 3600 (2)	3600 (2)	1800 (4) / 3600 (2)	1800 (4) / 3600 (2)
Standard voltage	115 / 230	115/208-230	115 / 230	115 / 230, 208 / 230, 115 / 208 – 230 100 – 120 / 200 – 240, 120 / 140 & 100 – 120 / 200 – 240	115 / 230 (G1115), 115 / 208 – 230
Phase / Base frequency (Hz)	1 / 60				
Service factor	1.15	1.15	1.0 / 1.15	1.15 / 1.35	1.15 / 1.2 / 1.25 / 1.35
Design code (NEMA)	N	N	N/A***	B, L, N, O	E, L, N
Insulation class	F	F	B	B, B3, F4	B, B3
Insulation system	IRIS	IRIS	N/A***	N/A***	N/A***
Duty cycle	Continuous				
Thermal protection	None	None	Automatic Reset	Automatic / Manual / None	Automatic / Manual / None (C235)
Mechanical Characteristics					
Frame size (mounting)	56C	56 - 56C	56J	48 – 215T	48 – 56 – 56H
Enclosure	TEFC	TEFC	TEFC	DP	DP
Frame material	300 Series Stainless Steel	White Epoxy Steel	Rolled Steel	Rolled Steel	Rolled Steel
End bracket material	300 Series Stainless Steel	White Epoxy Steel	Cast Aluminum, Steel	Cast Aluminum	Cast Aluminum
Conduit box material	300 Series Stainless Steel	White Epoxy/Stainless Cover	Steel	Steel	N/A***
Fan guard material	300 Series Stainless Steel	White Polypropylene	Steel	N/A***	N/A***
Fan material	Polypropylene	Composite	Plastic	N/A***	N/A***
Lead termination	Conduit box	Conduit box	Conduit box Flying Leads (Jxxx Models) .33HP to 3HP	Conduit box	NPS Hole
Standard mounting	C-Face with Rigid Base	C-Face with Rigid Base & C-face	Footless	Rigid Base	Resilient Base
Drive end shaft slinger	No	No	Yes	No	No
Paint	N/A	White Epoxy	Gray powder-coat	Gray powder-coat Blue enamel	Black powder-coat
Bearings	Double Sealed			Ball Bearings	Ball Bearings
Grease	Exxon Polyrex EM				
Standard conduit box assembly position	F1	F1	F1	F1	F1 (NPS Hole)
Performance Characteristics					
Temperature rise	N/A***				
Encoder provisions	No				
Other Characteristics					
Warranty *	12 months from Installation. 18 months from Purchase.				
Agency listings **	UL Recognized, CSA Certified, and CE Mark				

* See Terms and Conditions for motor warranty explanation.

Marathon warranty service can be arranged through Rexnord Regal service centers. See list of service centers on our website at www.automationdirect.com.

** To obtain the most current agency approval information, see the Agency Approval Checklist on the specific part number's web page.

*** Data not available from manufacturer.

marathon[®] Motors Jet Pump (Centrifugal), 1-phase Totally Enclosed Motors

C-Face Footless, 56J



Features

- Service Factor is 1.0 or 1.5, depending on model
- Double-sealed ball bearings, mechanically locked on shaft end
- Capacitor start/capacitor run design for higher efficiency, as noted
- Automatic reset thermal protector
- 416 stainless steel threaded shaft with slinger (NEMA 56 frame)
- Drip cover not included
- UL Recognized and CSA Certified

Applications

- Typical uses include: jet pumps and jet pump motor replacements.

Motor Shipping Schedule *

Same or one day *	Up to 7 days	Up to 10 days
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Color indicates shipping lead time in business days. Check stock status online.

* Certain heavy and oversized items can be shipped only via LTL. Check our website for current shipping method constraints by part number.

Motor Specifications – Jet Pump (Centrifugal) 1-phase Totally Enclosed Motors

Part Number*	Price	HP	Base RPM	Volts	Encl.	NEMA Design	NEMA Frame	Model No.	Weight (lb)*	Footnotes	Drawing Links
C1336	\$382.00	1/3	3600	115/230	TEFC	N/A**	56J	5KC33FN4180X	13.5	None	PDF
C465	Retired	1/2				N/A**		5KC39QN3218X	24.5	Model on nameplate may be 5KC39QN3218GX	PDF
C352	Retired	1				N/A**		5KC49NN2135X	29	15	PDF
C878	Retired	2				N/A**		5KCR49TN2164T	38	ES,1,15	PDF

* Refer to the Motor Shipping Schedule table for shipping information.

Certain heavy and oversized items can be shipped only via LTL. Check our website for current shipping method constraints by part number.

** Data not available from manufacturer.

Footnotes: 1 = Capacitor Start/Capacitor Run design for reduced amperage
 15 = Fixed CW Rotation, viewing opposite shaft (or lead end) of motor
 ES = Energy Saver Design

Note: Please review the AutomationDirect Terms & Conditions for warranty and service on this product. Warranty service can be arranged through numerous Marathon Electric service centers. See list of service centers on our Website at www.automationdirect.com.

Performance Data 1-phase 56J Frame Motors (230V/60Hz except as indicated) Jet Pump (Centrifugal) Totally Enclosed Motors

Part Number	HP	F.L. RPM	Current @ 115V/230V (Amps)			Torque (lb-ft)			F.L. Effic. %	F.L. Power Factor	Rotor Inertia (lb-ft ²)
			No Load 230V	Full Load 115/230V	Locked Rotor	Full Load	Locked Rotor	Break-down			
C1336	1/3	3450	2.3	5.6 / 2.8	14	0.51	1.33	1.51	N/A**	N/A**	0.012
C465	1/2	3450	2.8	7.4 / 3.7	20.5	0.76	1.18	2.29	N/A**	N/A**	0.017
C352	1	3450	3.6	13.0 / 6.5	40.5	1.52	3.07	4.14	N/A**	N/A**	0.036
C878	2	3450	1.27	17.8 / 8.9	52.8	3.04	4.60	6.12	N/A**	N/A**	0.055

* Maximum Constant HP RPM is for direct-coupled loads.

** Data not available from manufacturer



General Purpose, 1-phase (NEMA Service Factor) Drip-proof Motors



Rigid Base



C-Face Footed (Rigid Base)

Rigid Base Features

- Heavy gauge steel frame and base
- Ball bearings (except as noted)
- Economical capacitor start designs
- Service factor, as noted
- UL recognized and CSA certified

C-Face Footed (Rigid Base) Features

- Ball bearings, mechanically locked on shaft end
- NEMA service factors
- Heavy gauge steel frame and base
- Capacitor start, capacitor run design for higher efficiency
- UL recognized and CSA certified

Applications

- Typical uses include machine tools, conveyors, packaging machines, batching machines, food and beverage equipment, pumps, and fans

Motor Shipping Schedule *		
Same or one day *	Up to 7 days	Up to 10 days

Color indicates shipping lead time in business days. Check stock status online.

* Certain heavy and oversized items can be shipped only via LTL. Check our website for current shipping method constraints by part number.

Motor Specifications – General Purpose, 1-phase (NEMA Service Factor), Rigid Base, Drip-proof Motors

Part Number*	Price	HP	Base RPM	Volts	Service Factor	Encl.	NEMA Design	NEMA Frame	Model No.	Weight (lb)*	Notes	Drawing Links
Rigid Base												
4354	\$175.00	1/4	1800	115	1.35	DP	N/A**	48	5KH39QN9538	13	–	PDF
4362	\$180.00		1800	115			N/A**	48	5KH39QN9686X	13	Auto Overload	PDF
C147A	\$293.00		1800	115 / 230			N	48	048B17D11005	17	Suitable for 208VAC @ 60Hz	PDF
C158A	Retired	1/3	1800	115 / 230	1.35 @ 60Hz 1.0 @ 50Hz	N	56	056B17D11019	21	PDF		
G1098A	Retired	1/2	3600	115 / 230	1.25	N	48	048B34D11003	20	PDF		
C167A	\$361.00		1800	115 / 230		N	56	056B17D11018	23	PDF		
G915A	\$319.00	3/4	3600	115 / 230	1.25	N	56	056B34D11019	25	PDF		
C175A	Retired		1800	115 / 230		B	56	056B17D15545	42	PDF		
C179A	\$229.00	1	3600	115 / 230	1.15	B	56	056B34D11014	30	PDF		
C188A	\$414.00	1	1800	115 / 208-230		B	143T	143C17DRR40001A1	31	–		PDF
G937A	Retired	1-1/2	3600	115 / 230	1.15	N	56	056B34D11012	35	Suitable for 208VAC @ 60Hz		PDF
C191	Retired	1-1/2	1800	115 / 208-230		N/A**	145T	5KCR49SN0065	35	N/A**		PDF
C185A	Retired	1-1/2	1800	115 / 230	1.15	B	56H	056B17D15548	45	Suitable for 208VAC @ 60Hz	PDF	
C187A	\$664.00	2	3600	115 / 230		N/A**	56	056B34D11011	38	Suitable for 208VAC @ 60Hz	PDF	
C193A	Retired	2	1800	115 / 230	1.15	N/A**	56HZ***	056B17D15555	50	Suitable for 208VAC @ 60Hz	PDF	
I127	\$604.00	2	1800	115 / 208-230		L	145T	145TBDR5337	48	Manual Overload	PDF	
C194	\$736.00	3	3600	115 / 230	1.15	N/A**	145T	5KCR48TN8062	38	N/A**	PDF	
C-Face Footed (Rigid Base)												
E261A	\$381.00	1/2	1800	100 - 120 / 200 - 240	1.25	DP	N/A**	56C	056B17D11029	25	Auto Overload	PDF
E268A	\$543.00	3/4		100 - 120 / 200 - 240	1.25		N		056B17DRR70008A1	35	Manual Overload	PDF
EG277A	Retired	1		100 / 240 & 100 - 120 / 200 - 240	1.15		N		056B17DRR70019A1	35	Manual Overload	PDF

* Refer to the Motor Shipping Schedule table for shipping information.

Certain heavy and oversized items can be shipped only via LTL. Check our website for current shipping method constraints by part number.

** Data not available from manufacturer.

*** Base of 56HZ frame motors has holes and slots to match NEMA 56, 56H, 143T, and 145T mounting dimensions.

Note: Please review the AutomationDirect Terms & Conditions for warranty and service for this product. Warranty service can be arranged through numerous Marathon Electric service centers. See list of service centers on our website at www.automationdirect.com

General Purpose, 1-phase (NEMA Service Factor) Drip-proof Motors

Performance Data - General Purpose, 1-phase (NEMA Service Factor) Drip-proof Motors											
Part Number	HP	F.L. RPM	Current @ 115V/230V (Amps)			Torque (lb-ft)			F.L. Effic. %	F.L. Power Factor	Rotor Inertia (lb-ft ²)
			No Load 230V	Full Load 115/230V	Locked Rotor	Full Load	Locked Rotor	Break-down			
4354	1/4	1725	4.54	5.1	30.2 / 15.1	0.75	1.20	2.02	57.5	59.5	0.0546
4362	1/4	1725	4.54	5.1	30.2 / 15.1	0.75	1.20	2.02	52.5	59.5	0.0546
C147A	1/4	1745	0.5	2.4 / 1.2	21.4 / 10.7	0.75	2.54	1.94	68.5	92.7	0.0413
C158A	1/3	1725	1.2	3.8 / 1.9	28.4 / 14.2	1.00	3.63	2.72	72.4	79	0.0497
G1098A	1/2	3450	0.6	4.4 / 2.2	42.3 / 21.2	0.76	2.08	2.13	72.4	98	0.0218
C167A	1/2	1725	0.9	4.6 / 2.3	35.4 / 17.7	1.53	4.73	3.78	76.2	91.6	0.0609
E261A	1/2	1725	0.9	4.4 / 2.2	33.9 / 17	1.53	4.75	3.78	76.2	91.6	0.0609
G915A	3/4	3450	1.4	7.2 / 3.6	57.5 / 28.8	1.14	3.38	3.19	76.2	89.2	0.0255
C175A	3/4	1725	1.0	6.0 / 3.3	61.2 / 30.6	3.00	9.50	8.27	81.8	97.2	0.0748
E268A	3/4	1725	1.3	8.8 / 4.4	60.4 / 30.2	2.28	8.61	7.24	81.8	88	0.0309
C179A	1	3450	0.9	8.8 / 4.4	50 / 25	1.50	3.6	4.5	80.4	99	0.0321
C188A	1	1725	4.7	13.4 / 6.7	77.1 / 38.6	3.01	9.14	7.58	72	67.8	0.0884
EG277A	1	1725	1.1	8.8 / 4.4	68.4 / 34.2	3.00	8.94	7.99	82.6	96	0.0309
G937A	1-1/2	3450	2.7	13.6 / 6.8	112 / 56	2.25	4.56	8.25	81.5	93.4	0.0369
C191	1-1/2	1725	6.0	18.2 / 9.1	50.6	4.53	11.99	11.60	72	76.5	0.1015
C185A	1-1/2	1725	1.7	12.6 / 6.3	97.4 / 48.7	4.50	13.13	11.88	82.5	94.3	0.1491
C187A	2	3450	3.2	17.8 / 8.9	84.6 / 42.3	2.22	4.67	4.94	82.9	91.9	0.0394
C193A	2	1725	3.7	17.6 / 8.8	130 / 65	6.00	17.63	17.94	84.5	90.2	0.1696
I127	2	1740	3.9	18.8 / 9.4	127 / 63.5	6.02	15.90	14.90	81.5	86.1	0.1546
C194	3	3450	8.4	29.4 / 14.7	181.2 / 90.6	4.50	8.2	10.9	77	82	0.0530

* Maximum Constant HP RPM is for direct-coupled loads.

marathon[®] Motors General Purpose, 1-phase, Totally Enclosed, 4-in-1[®] Motors



C-Face Footed (Removable Base)

Features

- Double-sealed ball bearings, mechanically locked on shaft ends
- Heavy gauge steel construction
- Bolt-on, removable rigid base
- Suitable for horizontal or vertical mounting
- Capacitor start/capacitor run design for higher efficiency
- 1.15 Service Factor (except as noted)
- Will accept brake kits (available from Marathon)
- Will accept drip cover kits (available from Marathon)
- UL recognized and CSA certified

Applications

- Typical uses include machine tools, conveyors, packaging machines, batching machines, food and beverage equipment, pumps, and fans.

Motor Shipping Schedule *

Same or one day * Up to 7 days Up to 10 days

Color indicates shipping lead time in business days. Check stock status online.

* Certain heavy and oversized items can be shipped only via LTL. Check our website for current shipping method constraints by part number.

Motor Specifications – General Purpose, 1-phase, Totally Enclosed, 4-in-1 Motors

Part Number*	Price	HP	Base RPM	Volts	Service Factor	Encl.	NEMA Design	NEMA Frame	Model No.	Weight (lb)*	Drawing Links
G570	\$333.00	1/3	1800	115 / 208-230 // 110 / 220	1.15	TEFC	N	56C	056C17F5320	17	PDF
D311	\$275.00	1/2	3600	115 / 208-203					056C34F5301	22	PDF
G571	\$381.00		1800						056C17F5321	24	PDF
D312	\$336.00	3/4	3600	115 / 208-230					056C34F5302	27	PDF
G572	\$459.00		1800	115 / 208-230 // 110 / 220					056C17F5322	30	PDF
D313	\$405.00	1	3600	115 / 208-230					056C34F5303	30	PDF
G573	\$472.00		1800	115 / 208-230 // 110 / 220				56HC	056C17F5323	31	PDF
D314	\$488.00	1-1/2	3600	115 / 208-230				56C	056B34F5326	32	PDF
G574	\$542.00		1800	115 / 208-230 // 110 / 220				56HC	056B17F5305	40	PDF
D315	\$592.00	2	3600	115 / 208-230					056B34F5327	37	PDF
G575	\$696.00		1800	115 / 208-230 // 110 / 220					1.0	056B17F5306	51
D316	\$783.00	3	3600	208-230					1.15	056B34F5328	50

* Refer to the Motor Shipping Schedule table for shipping information.

Certain heavy and oversized items can be shipped only via LTL. Check our website for current shipping method constraints by part number.

Note: Please review the AutomationDirect Terms & Conditions for warranty and service on this product. Warranty service can be arranged through numerous Marathon Electric service centers. See list of service centers on our website at www.automationdirect.com.

General Purpose, 1-phase, Totally Enclosed, 4-in-1[®] Motors

C-Face Footed (Removable Base)

General Purpose, 1-phase, Totally Enclosed, 4-in-1 Motors											
Part Number	HP	F.L. RPM	Current @ 115V/230V (Amps)			Torque (lb-ft)			F.L. Effic. %	F.L. Power Factor	Rotor Inertia (lb-ft ²)
			No Load 230V	Full Load 115/230V	Locked Rotor	Full Load	Locked Rotor	Break-down			
<u>G570</u>	1/3	1725	2.8	6.6 / 3.3	32.4 / 16.2	1.00	3.48	2.79	68.5	60	N/A*
<u>D311</u>	1/2	3450	3.2	8.4 / 4.2	49 / 24.5	0.75	2.81	2.22	59.5	70	
<u>G571</u>	1/2	1725	3.5	8.8 / 4.4	42.6 / 21.3	1.51	5.24	4.52	66	58	
<u>D312</u>	3/4	3450	3.7	10.6 / 5.3	69.4 / 34.7	1.13	3.73	3.38	66	71.9	
<u>G572</u>	3/4	1725	3.8	11 / 5.5	61 / 30.5	2.25	8.31	6.12	70.5	71	
<u>D313</u>	1	3450	3.1	11.2 / 5.6	81.8 / 40.9	1.49	4.95	4.22	78.5	76	
<u>G573</u>	1	1725	4.4	13.4 / 6.7	69.4 / 34.7	3.02	9.06	7.63	72	69.5	
<u>D314</u>	1-1/2	3450	2.6	14.2 / 7.1	96 / 48	2.24	5.2	6.0	78.5	87.5	
<u>G574</u>	1-1/2	1725	4.1	15.2 / 7.6	107.6 / 53.8	4.51	14.8	12.4	80	80	
<u>D315</u>	2	3450	2.1	19.2 / 9.6	122.6 / 61.3	2.98	7.37	7.73	79	98.3	
<u>G575</u>	2	1725	4.9	20 / 10	136 / 68	6.02	19.4	15.7	80	81	
<u>D316</u>	3	3450	2.6	13.1 -11.8**	91	4.46	8.46	13.2	84	99.2	

* Data not available from manufacturer

** 208-230V (Amps)

Air Compressor, 1-phase, Drip-proof Motors

Rigid Base



Features

- Capacitor start/capacitor run design for low amps and high efficiency
- High starting and breakdown torque
- Heavy gauge steel frame and base
- Continuous duty at nameplate ratings
- Thermal protection, as noted
- UL recognized and CSA certified

Applications

- Typical uses include machine tools, conveyors, packaging machines, batching machines, food and beverage equipment, pumps, and fans

Motor Shipping Schedule *

Same or one day * Up to 7 days Up to 10 days

Color indicates shipping lead time in business days. Check stock status online.

* Certain heavy and oversized items can be shipped only via LTL.

Check our website for current shipping method constraints by part number.

Motor Specifications – Air Compressor, 1-phase, Drip-proof Motors

Part Number*	Price	HP	Base RPM	Volts	Service Factor	Encl.	NEMA Design	NEMA Frame	Model No.	Weight (lb)*	Notes	Drawing Links
C169	Retired	1/2	1800	115 / 230	1.25	DP	N/A**	56	5KC49GN0010Y	21	Manual Overload	PDF
D010	\$389.00	1	3600	115 / 208-230	1.15		E	56	056B34D2029	23	Manual Overload	PDF
C704	Retired	1-1/2	3600	115 / 230			N/A**	56	5KC49PN2521Y	31	Manual Overload	PDF
Z502	Retired	3	1800	230			L	184T	184TBDR5326	51	No Overload	PDF
D017	Retired	5	3600	230			N/A**	56H	56B34D5302	55	Manual Overload	PDF

* Refer to the Motor Shipping Schedule table for shipping information.

Certain heavy and oversized items can be shipped only via LTL. Check our website for current shipping method constraints by part number.

** Data not available from manufacturer.

Note: Please review the AutomationDirect Terms & Conditions for warranty and service on this product. Warranty service can be arranged through numerous Marathon Electric service centers. See list of service centers on our website at www.automationdirect.com.

Performance Data - Air Compressor, 1-phase, Drip-proof Motors

Part Number	HP	F.L. RPM	Current @ 115V/230V (Amps)			Torque (oz-ft)			F.L. Effic. %	F.L. Power Factor	Rotor Inertia (lb-ft ²)
			No Load 230V	Full Load 115/230V	Locked Rotor	Full Load	Locked Rotor	Break-down			
C169	1/2	1725	N/A*	8.8 / 4.4	46 / 23	24.4	89.8	68.2	60.9	N/A*	
D010	1	3450	3.2	10.6 / 5.3	74.6 / 37.3	23.9	56	65.7	72		
C704	1-1/2	3450	N/A*	21.3 / 10.6	N/A*	36.5	N/A*	N/A*	70		
Z502	3	1740	2.9	N/A / 12.1	83.6	144.8	387.2	318.4	82.5		
D017	5	3450	3.2	N/A / 20	135	121.8	220.8	316.8	84		

*Data not available from manufacturer.

Fan & Blower - Capacitor Start, Drip-proof Motors

Resilient Base



Features

- Ball bearings
- Heavy gauge steel frame and base
- Service factor, as noted
- Capacitor start/capacitor run
- Thermal protection, as noted
- UL recognized and CSA certified

Applications

- Typical uses include machine tools, conveyors, packaging machines, batching machines, food and beverage equipment, pumps, and fans.

Motor Shipping Schedule *

Same or one day * Up to 7 days Up to 10 days

Color indicates shipping lead time in business days. Check stock status online.

* Certain heavy and oversized items can be shipped only via LTL. Check our website for current shipping method constraints by part number.

Motor Specifications – Fan & Blower - Capacitor Start, One- and Two-Speed, Drip-proof Motors

Part Number*	Price	HP	Base RPM	Volts	Service Factor	Encl.	NEMA Design	NEMA Frame	Model No.	Weight (lb)**	Notes	Drawing Links
G1115	\$219.00	1/4	1800	115 / 230	1.35	DP	N	48	5KC35JN7JX	16	Auto Overload	PDF
C216	\$248.00	1/3	1800	115 / 208-230	1.35		N/A***	56	5KC36LN1X	18		PDF
C1152	\$220.00	1/2	3600	115 / 208-230	1.25		48	5KC39ON3220X	19	PDF		
C1153	\$350.00	1/2	1800	115 / 208-230	1.25		5KC49GN0022X	21	PDF			
C1155	\$273.00	3/4	3600	115 / 208-230	1.25		5KC38NN410X	17	PDF			
B319	\$368.00	3/4	1800	115 / 208-230	1.25		056C17D2074	23	PDF			
D118	\$340.00	1	3600	115 / 208-230	1.15		N	56	056C34D2106	25	PDF	
C1158	\$473.00	1	1800	115 / 208-230	1.15		N/A***	5KC49PN0164X	29	PDF		
C235	\$391.00	1	1800	115 / 208-230	1.15		5KC49PN0155	31	No Overload	PDF		
D115	\$470.00	1-1/2	3600	115 / 208-230	1.15		056B34D2027	28	PDF			
C1160	\$488.00	1-1/2	1800	115 / 208-230	1.15		N	56H	5KCR49SN0150X	35	Auto Overload	PDF
C1161	\$537.00	2	3600	115 / 208-230	1.2		5KCR49RN2148T	33	PDF			
B352	\$641.00	2	1800	115 / 208-230	1.15		056B17D5331	50	PDF			

* Refer to the Motor Shipping Schedule table for shipping information.

** Certain heavy and oversized items can be shipped only via LTL. Check our website for current shipping method constraints by part number.

*** Data not available from manufacturer.

Note: Please review the AutomationDirect Terms & Conditions for warranty and service on this product. Warranty service can be arranged through numerous Marathon Electric service centers. See list of service centers on our website at www.automationdirect.com.

Fan & Blower - Capacitor Start, Drip-proof Motors

Resilient Base

Performance Data - Fan & Blower - Capacitor Start, One and Two-Speed, Drip-proof Motors											
Part Number	HP	F.L. RPM	Current @ 115V/230V (Amps)			Torque (lb-ft)			F.L. Effic. %	F.L. Power Factor	Rotor Inertia (lb-ft ²)
			No Load 230V	Full Load 115/230V	Locked Rotor	Full Load	Locked Rotor	Break-down			
G1115	1/4	1725	N/A*	5.2 / 2.6	24.8 / 12.4	0.76	2.91	2.13	52.5	58.0	N/A*
C216	1/3	1725	2.4	6.0 / 3.0	30.66 / 15.33	1.01	3.38	2.63	N/A*	N/A*	
C1152	1/2	3450	2.5	8.2 / 4.1	54.8 / 27.4	0.76	3.83	2.37		N/A*	
C1153	1/2	1725	3.6	8.6 / 4.3	34.8 / 17.4	1.53	3.19	4.89		N/A*	
C1155	3/4	3450	3.0	10.0 / 5.0	64 / 32	1.13	3.11	3.75		N/A*	
B319	3/4	1725	3.2	10.0 / 5.0	N/A*	2.28	3.09	4.94		70.1	
D118	1	3450	3.8	12.0 / 6.0	44.2 / 22.1	3.04	4.69	8.20	72	76	
C1158	1	1725	5.3	14.7 / 7.4	71.8 / 35.9	3.04	4.69	8.20	N/A*	N/A*	
C235	1	1725	5.1	13.6 / 6.8	75.8 / 37.9	3.04	10.32	7.40			
D115	1-1/2	3450	1.6	13.0 / 6.5	83.6 / 41.8	2.25	3.63	5.20	95.8	N/A*	
C1160	1-1/2	1725	N/A*	16.4 / 8.2	N/A*	4.57	N/A*	N/A*	N/A*		
C1161	2	3450	4.2	19.6 / 9.8	133 / 66.5	3.04	3.87	7.80			
B352	2	1725	5.4	21.0 / 10.5	131.8 / 65.9	6.03	19.50	15.70	78.6	78.3	

* Data not available from manufacturer



SST Washguard[®] 1-phase Motors



119475.00

SST Features

Stainless Steel Tough for demanding wash down applications!

- All exterior components of 300Series stainless steel, including motor frame, endshield and conduit box castings
- Available in 115/230 Voltage rating and 1800RPM speed rating.
- Moisture resistant sealant between frame and endbells
- Four locations for T-drains provided on each endshield
- Full-face nameplate is laser etched on the motor frame
- CE mark

All Washguard[®] series features:

- Interior Corrosion Protection
- Shaft seals on both ends of TEFC motors
- Sealed Bearings
- Internally locked shaftend bearing
- Meets IP55 enclosure protection
- UL Recognized, CSA

Applications

Designed to meet the demanding washdown conditions that you may find in the food processing, chemical processing, pharmaceutical, and beverage/brewing industries..

Motor Specifications – 1-phase

Part Number*	Price	HP	Base RPM	Volts	Service Factor	Encl.	NEMA Design	NEMA Frame	Weight (lb)	Drawing Links
C-Face with Base										
<u>191475.00</u>	\$738.00	1/2	1800	115/230 VAC	1.15	TEFC	N	56C	32	PDF
<u>191477.00</u>	\$848.00	3/4							39	PDF
<u>191479.00</u>	\$874.00	1							38	PDF

Performance Data - 1-phase

Part Number	HP	F.L. RPM	Current @ 115V/230V (Amps)			Torque (lb-ft)			F.L. Effic. %	F.L. Power Factor	Resistance Main	Rotor Inertia (lb-ft ²)
			No Load 230V	Full Load 115/230V	Locked Rotor	Full Load	Locked Rotor	Break-down				
C-Face with Base												
<u>191475.00</u>	1/2	1725	3.46	8.2/4.1	19.96	1.50	5.01	4.04	61	65	3.42	N/A*
<u>191477.00</u>	3/4		4.12	9.8/4.9	27.4	2.38	6.44	5.60	72	68	2.694	
<u>191479.00</u>	1		4.9	13.6/6.8	39	3.00	8.76	7.37	69	69	1.654	

* Data not available from manufacturer



White Duck Washguard® 1-phase Motors

Features

Enhanced performance in wet, humid areas!

- The original moisture-shedding "duck" motor
- Available in 115/230 Voltage rating and 1800 or 3600 RPM speed rating.
- Durable USDA-approved white epoxy finish
- Stainless steel shaft, conduit box cover, nameplate, fan guard
- Drains for all mounting orientations

All Washguard® series features:

- Interior Corrosion Protection
- Shaft seals on both ends of TEFC motors
- Sealed Bearings
- Internally locked shaft-end bearing
- Meets IP55 enclosure protection
- UL Recognized, CSA

Applications

Designed to provide greater chemical resistance in harsh chemical processing environments; also handles demanding washdown conditions in the food processing, pharmaceutical, and beverage/brewing industries.



112431.00
112527.00
114311.00

Motor Specifications – 1-phase

Part Number*	Price	HP	Base RPM	Volts	Service Factor	Encl.	NEMA Design	NEMA Frame	Weight (lb)	Drawing Links
Rigid Base										
112431.00	\$538.00	1/2	1800	115/208–230 VAC	1.15	TEFC	N	56	27	PDF
C-Face with Base										
112527.00	\$563.00	1/2	1800	115/208–230 VAC	1.15	TEFC	N	56C	26	PDF
112528.00	\$628.00	3/4							33	PDF
112529.00	\$723.00	1							36	PDF
113583.00	\$596.00								3600	34
C-Face without Base										
114311.00	\$533.00	1/3	1800	115/208–230 VAC	1.15	TEFC	N	56C	26	PDF
114313.00	\$547.00	1/2							25	PDF
114317.00	\$717.00	1							32	PDF

Performance Data – 1-phase

Part Number	HP	F.L. RPM	Current @ 115V/230V (Amps)			Torque (lb-ft)			F.L. Effic. %	F.L. Power Factor	Resistance Main	Rotor Inertia (lb-ft ²)
			No Load 230V	Full Load 115/230V	Locked Rotor	Full Load	Locked Rotor	Break-down				
Rigid Base												
112431.00	1/2	1725	3.7	8.8/4.4	20.28	1.50	5.40	4.21	66	58	3.4	N/A
C-Face with Base												
112527.00	1/2	1725	3.7	8.8/4.4	20.28	1.50	5.40	4.21	66	58	3.4	N/A
112528.00	3/4	1725	4.13	10.8/5.4	30.1	2.25	7.16	6.15	70	64	2.6	
112529.00	1	1725	4.6	12.8/6.4	33	3.00	9.00	7.00	75	68	1.9	
113583.00	1	3450	3.7	12.0/6.2-6.0	34	1.50	5.00	4.00	70	76	1.92	
C-Face without Base												
114311.00	1/3	1725	2.68	6.4/3.4-3.2	15.4	1.00	3.78	3.10	62	55	0	N/A
114313.00	1/2	1725	3.7	8.8/4.4	20.28	1.50	5.40	4.49	66	58	3.4	
114317.00	1	1725	4.6	12.8/6.4	33	3.00	9.00	7.00	75	68	1.9	

* Data not available from manufacturer

Regal AC Motor Selection - Washdown & General Purpose 3-Phase Motors

Regal 3-phase General Purpose & Washdown Motor Selection						
Manuf / Application	Leeson® Washdown		Marathon® General Purpose			
Series	SST Duck	White Duck	Jet Pump	NEMA Premium® XRI®	4-in-1 XRI	Globetrotter
Electrical Characteristics						
HP range	1/3 - 2	1/4 - 10	1/3 - 2	1 - 10	1/3 - 3/4	3-200
Base speed (# poles)	1800 (4) and 3600 (2)		3600 (2)	1200(6), 1800(4), 3600(2)	1800 (4) and 3600 (2)	1800 (4)
Standard voltage	208-230/460	208-230/460 & 230/460V	208-230/460 (J063A/65A is 230/460 only)	208-230/460	208-230 / 460 and 575	208-230/460 & 230/460V ***
Ph/Base frequency (Hz)	3 / 60					
Service factor	1.15	1.15 & 1.25 ***	1.75-1.15 Line 1.0 Drive	1.15 (line) ; 1.0 (drive)	1.15	1.15
Design code (NEMA)	A & B	B	B	A (E2001A) B (all others)	B	A or B***
Insulation class	F	F	B	F	F3	F
Insulation system	IRIS	IRIS	Max Guard	CR200 magnet wire		
Duty cycle	Continuous					
Thermal protection	None	Some Models	None			
Mechanical Characteristics						
Frame size (mounting)	56C(HC)-143TC- 145TC	56(C,HC), 145T(TC), 182T(TC), 184T(TC), 213T(TC); 215T(TC)	56J(HJ)	56C - 215TC	56C	182T - 447T
Enclosure	TENV and TEFC		TEFC and DP	TEFC	TENV and TEFC	Drip Proof and TEFC
Frame material	Stainless Steel	Rolled Steel			Rolled Steel	Rolled Steel or Cast-iron***
End bracket material	Stainless Steel	Steel	Cast Aluminum, Steel	Aluminum	Cast Aluminum	Steel
Conduit box material	Stainless Steel	Steel			Steel	Steel
Fan guard material	Stainless Steel	Propolyene	Steel	Plastic	Polypropylene	Rolled Steel or Cast-iron***
Fan material	Polypropylene	Composite	Plastic	Polypropylene	Polypropylene	Polypropylene
Lead termination	Conduit Box				Conduit box except Terminal block (<1/2 hp)	Conduit box
Standard mounting	C-Face with and w/o Base ***		C-Face with Rigid Base		C-Face with Removable Base	
Drive end shaft slinger	-	-	No	Yes	No	-
Paint	N/A	White Epoxy	N/A	Blue enamel	Gray powder	Black powder- coat; Black enamel
Bearings	Ball			Ball (C3 fit)	Ball	Ball
Grease	Exxon Polyrex EM					
Standard conduit box assy. position	F1 only & F1/F2 capable***		F1	F3	F1 & NPO	F1, F2 reversible***
Performance Characteristics						
Constant torque speed range	10:1 TEFC 1000:1 TENV		10:1	10:1	10:1 (TEFC) 1000:1 (TENV)	10:1
Variable torque speed range	10:1		10:1	10:1	-	10:1
Constant HP speed range	2:1	2:1	2:1	2:1	2:1	2:1
Temperature rise	F	F	B	F	F	F
Encoder provisions	No	No	No	No	No	No
Other Characteristics						
Warranty *	12 months from installation, 18 months from purchase. (through Rexnord Regal)			3 years	3 years	3 years
Agency listings **	UL Recognized, CSA Certified, CE Mark++					

* See Terms and Conditions for motor warranty explanation. Marathon warranty service can be arranged through Rexnord Regal service centers. See list of service centers on our website at www.automationdirect.com.

** To obtain the most current agency approval information, see the Agency Approval Checklist on the specific part number's web page.

***Varies by Model

Regal AC Motors – MAX Series 3-Phase High Performance Inverter-Duty Motors

Regal 3-Phase High Performance Inverter Duty Motor Selection					
Manuf / Application	Marathon MAX Series High Performance Inverter Duty				
Series	Micro MAX™	MAX+	Black Max®	Blue Max®	Symax PMAC
Electrical Characteristics					
HP range	1/4 - 10	1/2 - 5	1/4 - 30	40 - 100	1/2 - 10
Base speed (# poles)	1800 (4)	1800 (4)	1800 (4) and 1200 (6)	1800 (4)	1800 (6) , 1200(6)- VFD operation only
Standard voltage	230/460 (<1/2 hp are 230V only)	230/460	230/460 and 575	230/460	230/460
Ph/Base frequency (Hz)	3 / 60				
Service factor	1.0	1.0	1.0	1.0	1.0
Design code (NEMA)	A or B (varies by model)	A (1/2 – 1 hp) B (>1hp)	A	A	n/a
Insulation class	H	F	F	H	F and H
Insulation system	CR200 magnet wire	CR200 magnet wire	MAX GUARD®		
Duty cycle	Continuous				
Thermal protection	None		Class F thermostats		
Mechanical Characteristics					
Frame size (mounting)	56C - 215TC	56C - 184TC	56C - 286TC	324T(C) - 405T(C)	56C(Z), 182TC, 184TC, 213TC,215TC
Enclosure	TENV and TEFC	TENV	TENV	TEFC and TEBC	TENV and TEFC
Frame material	Rolled Steel	Rolled Steel (<2hp) Cast-iron (2hp) Aluminum (>2hp)	Rolled Steel w Al face Cast-iron Aluminum	Cast-iron	Rolled Steel or Cast-iron (varies by model)
End bracket material	Aluminum	Cast-iron	Aluminum, Cast-iron	Cast-iron	Steel
Conduit box material	Steel	Steel	Steel	Cast-iron	Steel
Fan guard material	Polypropylene	None (all ratings TENV)	None (all ratings TENV)	Cast-iron	Rolled Steel or Cast-iron (varies by model)
Fan material	Polypropylene	None (all ratings TENV)	None (all ratings TENV)	Polypropylene	Polypropylene
Lead termination	Conduit box except Terminal block (<1/2 hp)	Conduit box	Conduit box	Conduit box	Conduit box
Standard mounting	C-Face with Rigid Base & C-Face Round Body	C-Face with Rigid Base	C-Face with Rigid Base	C-Face with Rigid Base	C-Face with Rigid Base
Drive end shaft slinger	No	No	No	Yes	-
Paint	Black powder- coat; Black enamel	Black powder; Black enamel	Black enamel	Blue enamel	Black powder- coat; Black enamel
Bearings	Ball (C3 fit)	Ball (C3 fit)	Ball (C3 fit)	Ball (C3 fit)	Ball
Grease	Exxon Polyrex EM	Exxon Polyrex EM	Exxon Polyrex EM	Exxon Polyrex EM	Exxon Polyrex EM
Standard conduit box assembly position	F1 (1/4 & 1/3 hp) F3 (all others)	F1, reversible to F2 (2hp) F1 (all others)	F1, reversible to F2	F1, reversible to F2	F1
Performance Characteristics					
Constant torque speed range	20:1 (TEFC) 1000:1 (TENV)	1000:1	1000:1 (TENV)	2000:1 (all enclosures)	20:1
Variable torque speed range	-	-	-	-	10:1
Constant horsepower speed range	2:1	2:1	2:1 (90–120Hz intermittent @50% duty cycle)	2:1	2:1
Temperature rise	B	varies by model #	varies by model #	F (TEFC) B (TEBC)	F
Encoder provisions	No	Yes	Yes	Yes	No
Other Characteristics					
Warranty *	3 years (through Rexnord Regal for MAX, XRI and 4N1 Motors)				
Agency listings **	UL Recognized, CSA Certified, CE Mark++				

* See Terms and Conditions for motor warranty explanation. Marathon warranty service can be arranged through Rexnord Regal service centers. See list of service centers on our website at www.automationdirect.com.

** To obtain the most current agency approval information, see the Agency Approval Checklist on the specific part number's web page.

++Some Symax PMAC models are not CE Mark. See Symax for details



SST Washguard - 3-phase Motors

Features

Stainless Steel Tough for demanding wash down applications!

- All exterior components of 300-Series stainless steel, including motor frame, endshield and conduit box castings
- 208-230/460 Voltage up to 2HP
- 1800 or 3600 RPM models available
- Offered in C-Face with Base or C-Face without Base.
- Moisture resistant sealant between frame and endbells
- Four locations for T-drains provided on each endshield
- Full-fact nameplate is laser etched on the motor frame
- CE mark



[191204.00](#)

[191202.00](#)

All Washguard series features:

- Interior Corrosion Protection
- Shaft seals on both ends of TEFC motors
- Sealed Bearings
- Internally locked shaft-end bearing
- Meets IP55 enclosure protection
- UL Recognized, CSA

Applications

Designed to meet the demanding washdown conditions that you may find in the food processing, chemical processing, pharmaceutical, and beverage/brewing industries..

Motor Specifications – 3-Phase										
Part Number*	Price	HP	Base RPM	Volts	Service Factor	Encl.	NEMA Design	NEMA Frame	Weight (lb)	Drawing Links
C-Face with Base										
<u>191204.00</u>	\$693.00	1/2	1800	208-230/460 VAC	1.15	TENV	B	56C	33	<u>PDF</u>
<u>191207.00</u>	\$751.00	3/4							35	<u>PDF</u>
<u>191206.00</u>	\$959.00		32						<u>PDF</u>	
<u>191487.00</u>	\$955.00	1	1800					TEFC	143TC	46
<u>191561.00</u>	\$924.00	1 1/2	3600			56HC			48	<u>PDF</u>
<u>191560.00</u>	\$973.00		48			<u>PDF</u>				
<u>191491.00</u>	\$1,181.00	2	1800			145TC		57	<u>PDF</u>	
<u>191563.00</u>	\$1,062.00		56HC			53		<u>PDF</u>		
<u>191490.00</u>	\$1,202.00		3600			145TC		47	<u>PDF</u>	
<u>191562.00</u>	\$1,091.00		56HC			49		<u>PDF</u>		
C-Face without Base										
<u>191202.00</u>	\$630.00	1/3	1800	208-230/460 VAC	1.15	TENV	B	56C	30	<u>PDF</u>
<u>191205.00</u>	\$675.00	1/2							33	<u>PDF</u>
<u>191208.00</u>	\$733.00	3/4							38	<u>PDF</u>
<u>191564.00</u>	\$793.00	1						67	<u>PDF</u>	
<u>191565.00</u>	\$915.00					143TC		44	<u>PDF</u>	
<u>191569.00</u>	\$1,060.00	2				56C		47	<u>PDF</u>	
<u>191570.00</u>	\$1,061.00					145TC		67	<u>PDF</u>	



SST Washguard - 3-phase Motors

Performance Data - 3-Phase													
Part Number	HP	F.L. RPM	Current @ 230V/460V (Amps)			Torque (lb-ft)			Torque Speed Rating		F.L. Effic. %	F.L. Power Factor	Resistance Main
			No Load 460V	Full Load 230/460V	Locked Rotor	Full Load	Locked Rotor	Break-down	Constant	Variable			
C-Face with Base													
<u>191204.00</u>	1/2	1740	0.8	1.5-1.6/0.80	6	1.50	4.41	5.56	1000:1	10:1	81.5	68	29
<u>191207.00</u>	3/4	1740	0.7	2.4-2.3/1.2	9.3	2.25	7.25	10.19	1000:1	10:1	82.5	73	17.8
<u>191206.00</u>		3450	0.45	2.2-2.0/1.0	6.9	1.14	2.68	3.25	1000:1	10:1	78.5	86	5.67
<u>191487.00</u>	1	1750	1	3.2-3.0/1.5	15.1	2.99	13.20	15.80	10:1	10:1	85.5	71.5	0
<u>191561.00</u>	1 1/2	1750	1.3	4.8-4.4/2.2	19.9	4.51	18.10	21.05	10:1	10:1	86.5	73.5	0
<u>191560.00</u>		3510	0.8	4.2-3.8/1.9	21.1	2.24	8.83	9.81	10:1	10:1	84	88	0
<u>191491.00</u>	2	1750	1.4	5.8-5.4/2.7	23.4	6.00	17.40	25.40	10:1	10:1	86.5	80	0
<u>191563.00</u>		1750	1.4	5.8-5.4/2.7	23.4	6.00	17.40	25.40	10:1	10:1	86.5	80	0
<u>191490.00</u>		3490	0.9	5.3-5.0/2.5	25.4	3.00	10.70	11.80	10:1	10:1	85.5	87.5	0
<u>191562.00</u>		3450	0.9	5.3-5.0/2.5	25.4	3.00	10.70	11.80	10:1	10:1	85.5	87.5	0
C-Face without Base													
<u>191202.00</u>	1/3	1740	0.45	1.2-1.3/0.65	4.5	1.00	3.50	4.50	1000:1	10:1	78.5	63	9.63
<u>191205.00</u>	1/2	1740	0.6	1.5-1.6/0.80	6	1.50	4.41	5.56	1000:1	10:1	81.5	68	29
<u>191208.00</u>	3/4	1740	0.7	2.4-2.3/1.2	9.3	2.25	7.25	13.58	1000:1	10:1	82.5	73	17.8
<u>191564.00</u>	1	1750	1	3.2-3.0/1.5	15.1	2.99	13.20	15.80	10:1	10:1	85.5	71.5	0
<u>191565.00</u>		1750	1	3.2-3.0/1.5	15.1	2.99	13.20	15.80	10:1	10:1	85.5	71.5	0
<u>191569.00</u>	2	1750	1.4	5.8-5.4/2.7	23.4	6.00	17.40	25.40	10:1	10:1	86.5	80	0
<u>191570.00</u>		1750	1.4	5.8-5.4/2.7	23.4	6.00	17.40	25.40	10:1	10:1	86.5	80	0

* Rotor Inertia Data (lb-ft²) not available from manufacturer



White Duck Washguard[®] 3-phase Motors

Motor Shipping Schedule *

Same or one day * Up to 7 days Up to 10 days

Color indicates shipping lead time in business days. Check stock status online.

* Certain heavy and oversized items can be shipped only via LTL. Check our website for current shipping method constraints by part number.

Motor Specifications – 3-Phase

Part Number*	Price	HP	Base RPM	Volts	Service Factor	Encl.	NEMA Design	NEMA Frame	Weight (lb)	Drawing Links						
Rigid Base																
112427.00	\$550.00	1/2	1800	208-230/460 VAC	1.15	TEFC	B	56	27	PDF						
112428.00	\$577.00	3/4							30	PDF						
119475.00	\$797.00	1							57	PDF						
121866.00	\$946.00	2							145T	48	PDF					
132196.00	\$1,198.00	3							182T	78	PDF					
132197.00	\$1,247.00	5		230/460 VAC	1.25				184T	90	PDF					
140819.00	\$1,760.00	7 1/2							213T	161	PDF					
140820.00	\$1,866.00	10							215T	181	PDF					
C-Face with Base																
113586.00	\$577.00	1/2							1800	230/460 VAC	1.15	TENV	B	56C	25	PDF
112429.00	\$577.00		208-230/460 VAC	TEFC	25	PDF										
112430.00	\$666.00	3/4	1200	208-230/460 VAC	TEFC	56HC	43	PDF								
119478.00	\$1,053.00	1					1800	38	PDF							
119476.00	\$843.00		1 1/2	3600	230/460 VAC	TENV	56C	37	PDF							
113590.00	\$659.00	1800		208-230/460 VAC	TEFC	66		PDF								
119480.00	\$968.00	1 1/2	3600	230/460 VAC	TENV	56HC	47	PDF								
113591.00	\$730.00		1800	208-230/460 VAC	TEFC		56C	38	PDF							
119483.00	\$1,059.00	2	3600	230/460 VAC		1.25		TEFC	B	145TC		48		PDF		
121868.00	\$1,031.00			208-230/460 VAC	56HC		44			PDF						
119482.00	\$1,044.00	3	1800	208-230/460 VAC			A			145TC	34	PDF				
122185.00	\$1,052.00			3600	208-230/460 VAC					182TC	79	PDF				
132198.00	\$1,286.00	5	1800	230/460 VAC	B		145C				48	PDF				
121870.00	\$1,217.00						3600			184TC	91	PDF				
132201.00	\$1,416.00	7 1/2	1800	230/460 VAC	B		90				PDF					
132200.00	\$1,482.00						3600			213TC	157	PDF				
140822.00	\$1,861.00	10	1800	230/460 VAC	B		215TC			179	PDF					
140821.00	\$1,929.00															
C-Face without Base																
113649.00	\$511.00	1/4	1800	208-230/460 VAC	1.15	TENV	B	56C	22	PDF						
113473.00	\$560.00	1/2				25			PDF							
116644.00	\$561.00					3/4			23	PDF						
113019.00	\$649.00	1				3600			230/460 VAC	TEFC	31	PDF				
116645.00	\$649.00										28	PDF				
119468.00	\$794.00	1 1/2				1800			208-230/460 VAC	TEFC	35	PDF				
113023.00	\$661.00										38	PDF				
119469.00	\$817.00	2				1800			208-230/460 VAC	TEFC	40	PDF				
122182.00	\$1,022.00										145TC	60	PDF			
119471.00	\$982.00	3				1800			230/460 VAC	TEFC	56C	50	PDF			
122184.00	\$1,232.00		145TC	57	PDF											
132440.00	\$1,410.00	7 1/2	1800	230/460 VAC	TEFC	184TC	67	PDF								
141266.00	\$1,862.00					213TC	135	PDF								



[112427.00](#)
[113586.00](#)
[113649.00](#)

Features

Enhanced performance in wet, humid areas!

- The original moisture-shedding "duck" motor
- Durable USDA-approved white epoxy finish
- Stainless steel shaft, conduit box cover, nameplate, fan guard
- 208-230/460 Voltage up to 10HP
- 1800 or 3600 RPM models available
- Mounting options include Rigid Base, C-Face with Base, and C-Face without base.
- Drains for all mounting orientations
- CE mark

All Washguard series features:

- Interior Corrosion Protection
- Shaft seals on both ends of TEFC motors
- Sealed Bearings
- Internally locked shaft-end bearing
- Meets IP55 enclosure protection
- UL Recognized, CSA

Applications

Designed to provide greater chemical resistance in harsh chemical processing environments; and handles demanding washdown conditions in the food processing, pharmaceutical, and beverage/brewing industries.



White Duck Washguard[®] 3-phase Motors

Performance Data - 3-Phase													
Part Number	HP	F.L. RPM	Current @ 230V/460V (Amps)			Torque (lb-ft)			Torque Speed Rating		F.L. Effic. %	F.L. Power Factor	Resistance Main
			No Load 460V	Full Load 230/460V	Locked Rotor	Full Load	Locked Rotor	Break-down	Constant	Variable			
Rigid Base													
112427.00	1/2	1725	0.8	1.9-2.0/1.0	5.1	1.50	3.75	5.41	10:1	10:1	74	63	31.5
112428.00	3/4	1725	1.1	2.8/1.4	8.1	2.25	6.63	8.38	10:1	10:1	77	65	26.24
119475.00	1	1760	1.0	3.2-3.2/1.6	14	3.00	12.00	15.80	10:1	10:1	85.5	68.5	12.96
121866.00	2	1745	1.7	5.8/2.9	26.58	6.00	24.60	28.80	10:1	10:1	86.5	75.6	6
132196.00	3	1760	1.9	7.8/3.9	33.5	8.90	22.50	36.00	10:1	10:1	89.5	80.5	6.08
132197.00	5	1760	2.54	12.6/6.3	49	14.96	30.10	50.20	10:1	10:1	89.5	83	2.68
140819.00	7 1/2	1765	6	22.4-21.6/10.8	73	22.20	50.00	64.20	10:1	10:1	91.7	72	.88
140820.00	10	1765	6.2	26.8/13.4	79	29.75	55.20	90.00	10:1	10:1	91.7	77	.755
C-Face with Base													
113586.00	1/2	1725	0.65	2.0-1.8/0.90	12.2	1.50	4.51	6.11	1000:1	10:1	78.5	67	9.66
112429.00		1725	0.8	1.9-2.0/1.0	5.1	1.50	3.75	5.41	10:1	10:1	74	63	31.5
112430.00	3/4	1725	1.1	2.7-2.8/1.4	8.1	2.25	6.63	8.38	10:1	10:1	77	65	26.24
119478.00	1	1170	1.2	3.8-3.8/1.9	10.7	4.50	13.50	15.80	10:1	10:1	82.5	60	1.63
119476.00		1760	1.0	3.2-3.2/1.6	14	3.00	12.00	15.80	10:1	10:1	85.5	68.5	12.96
113590.00		3450	0.57	2.8-2.6/1.3	12	1.50	4.50	6.00	1000:1	10:1	77	84.8	0
119480.00	1 1/2	1750	1.23	4.6-4.8/2.4	18.5	4.50	17.20	20.40	10:1	10:1	86.5	67.7	9.12
113591.00		3450	0.77	3.8/1.9	17	2.25	8.20	9.50	1000:1	10:1	84	88	8.92
119483.00	2	1745	1.7	6.0-5.8/2.9	26.58	6.00	24.60	28.80	10:1	10:1	86.5	75.6	6
121868.00		1745	1.7	5.8/2.9	26.58	6.00	24.60	28.80	10:1	10:1	86.5	75.6	6
119482.00		3490	0.95	5.2-4.8/2.4	26.00	3.00	10.80	13.00	10:1	10:1	85.5	88	6.4
122185.00		3490	0.95	5.2-4.8/2.4	26.00	3.00	10.80	13.00	10:1	10:1	85.5	88	6.4
132198.00	3	1760	1.9	7.8/3.9	33.5	8.90	22.50	36.00	10:1	10:1	89.5	80.5	6.08
121870.00		3490	1.9	8.0/4.0	41	4.50	17.97	20.83	10:1	10:1	86.5	86	3.83
132201.00	5	1760	2.54	12.6/6.3	49	14.96	30.10	50.20	10:1	10:1	89.5	83.1	2.68
132200.00		3515	1.7	12.0/6.0	47	7.50	16.00	26.00	10:1	10:1	88.5	89	2.32
140822.00	7 1/2	1765	6	22.4-21.6/10.8	73	22.20	50.00	64.20	10:1	10:1	91.7	72	.88
140821.00	10	1765	6.2	26.8/13.4	79	29.75	55.20	90.00	10:1	10:1	91.7	77	.755
C-Face without Base													
113649.00	1/4	1725	0.42	1.1/0.55	6.2	0.75	1.99	3.24	1000:1	10:1	68	57	20.15
113473.00	1/2	1725	0.65	2.0-1.8/0.90	12.2	1.50	4.51	6.11	1000:1	10:1	78.5	67	9.66
116644.00		1725	0.8	2.0/1.0	5.1	1.50	3.75	5.41	10:1	10:1	74	63	31.5
113019.00	3/4	1725	0.81	2.7-2.5/1.3	8.42	1.69	5.00	6.63	1000:1	10:1	80	70	23.28
116645.00		1725	1.1	2.7-2.8/1.4	8.1	2.25	6.63	8.38	10:1	10:1	77	65	26.24
119468.00	1	1760	1.0	3.2-3.2/1.6	14	3.00	12.00	15.80	10:1	10:1	85.5	68.5	12.96
113023.00		3450	0.57	2.6/1.3	12	1.50	4.50	6.00	1000:1	10:1	77	85	0
119469.00	1 1/2	1750	1.23	4.6-4.8/2.4	18.5	4.50	17.20	20.40	10:1	10:1	86.5	67.7	9.12
122182.00	2	1745	1.7	6.0-5.8/2.9	26.58	6.00	24.60	28.80	10:1	10:1	86.5	75.6	6
119471.00		1745	1.7	6.0-5.8/2.9	26.58	6.00	24.60	28.80	10:1	10:1	86.5	75.6	6
122184.00	3	3490	1.9	8.8-8.0/4.0	41	4.50	17.97	20.83	10:1	10:1	86.5	86	3.83
132440.00	5	1760	2.54	12.6/6.3	49	14.96	30.10	50.20	10:1	10:1	89.5	83	2.68
141266.00	7 1/2	1765	5.5	19.6/9.8	67.5	22.20	52.90	75.00	10:1	10:1	91.7	78.3	1.18

* Rotor Inertia Data (lb-ft²) not available from manufacturer

Leeson® Washguard® Motors Chemical Resistance Comparison

When choosing a Leeson Washguard(Trademark) SST Stainless Steel or White Duck White Epoxy motor, utilize the following chemical comparison chart to determine which may best fit your application.

CHEMICAL RESISTANCE COMPARISON			
CHEMICAL NAME	% CONCENTRATION	WHITE EPOXY	STAINLESS STEEL
<i>Continuous Exposure</i>			
Fresh Water	100	Excellent	Excellent
Salt Water	5	Excellent	Excellent
Salt Brine	Dilute	Fair	Good
Ammonium Hydroxide	Dilute	Good	Excellent
Citric Acid	10	Good	Excellent
Ethylene Glycol	100	Excellent	Excellent
Mineral Spirits	100	Excellent	Excellent
Sodium Hydroxide	5	Fair	Excellent
Sodium Hydroxide	20	Fair	Excellent
Sodium Hydroxide	50	Excellent	Excellent
Toluene	100	Fair	Fair
Animal Fats	NA	Excellent	Excellent
Mineral Oils	NA	Excellent	Excellent
Vegetable Oils	NA	Excellent	Excellent
Cutting Oils	NA	Excellent	Excellent
Detergents	NA	Excellent	Excellent
Gasoline	NA	Fair	Fair
Hydraulic Fluid	NA	Excellent	Excellent
Lubricating Oils	NA	Excellent	Excellent
General Weathering	NA	Fair	Excellent
Mold/Mildew	NA	Excellent	Excellent
Light Abrasion	NA	Excellent	Excellent
Heavy Abrasion	NA	Fair	Excellent
<i>Intermittent Exposure</i>			
Calcium Hydroxide (Lime)	100	Good	Excellent
Hydrochloric Acid	37	Good	Poor
Lactic Acid	Dilute	Excellent	Excellent
Lactic Acid	100	Fair	Fair
Potassium Hydroxide	50	Fair	Fair
Sodium Hypochlorite (Bleach)	15	Excellent	Excellent
Sulfuric Acid	10	Fair	Fair



Or...



Globetrotter Open Drip Proof 3-Phase General Purpose Motors



Features

- 208-230/460 Voltage
- 1800 or 3600 RPM models
- Rigid Base mounting
- Meets or exceeds NEMA Premium[®] efficiencies
- Steel Drip Proof Enclosure IP22 rating
- Steel Conduit box
- Inverter duty 10:1 variable torque and 2:1 constant torque, 1.0 SF
- 1.15 service factor on sinewave
- Class F, Class B Rise insulation
- Bearing Caps on 284 frame and higher
- Standard assembly F1, reversible to F2 assembly
- Dual frame mounting holes
- UL recognized, CSA certified, CE mark
- Three year warranty (through Regal)

Motor Shipping Schedule *

Same or one day * Up to 7 days Up to 10 days

Color indicates shipping lead time in business days. Check stock status online.

* Certain heavy and oversized items can be shipped only via LTL. Check our website for current shipping method constraints by part number.

Applications

Typical uses in many commercial and industrial environments such as HVAC, Conveyors, Pumping, and Cooling Towers. Globetrotter provides durability and dependability.

Motor Specifications – 3-Phase

Part Number*	Price	HP	Base RPM	Volts	Service Factor	Encl.	NEMA Design	NEMA Frame	Weight (lb)	Drawing Links
Rigid Base										
GT0010A	\$610.00	3	1800	208-230/460 VAC	1.15 (sine), 1.0 (drive)	ODP	A	182T	81	PDF
GT0013A	\$660.00	5						184T	91	PDF
GT0016A	\$862.00	7 1/2						213T	133	PDF
GT0019A	\$945.00	10						215T	144	PDF
GT0059	\$1,486.00	15					B	254T	272	PDF
GT0062	\$1,657.00	20						256T	314	PDF
GT0065	\$1,995.00	25						284T	329	PDF
GT0067	\$2,165.00	30						286T	377	PDF
GT0073	\$2,543.00	40						324T	452	PDF
GT0077	\$2,742.00	50						326T	507	PDF

Performance Data - 3-Phase

Part Number	HP	F.L. RPM	Current @ 230V/460V (Amps)			Torque (lb-ft)			Frame Material	F.L. Effic. %	F.L. Power Factor	Resistance Main	Rotor Inertia (lb-ft ²)
			No Load 460V	Full Load 230/460V	Locked Rotor	Full Load	Locked Rotor	Break-down					
Rigid Base													
GT0010A	3	1770	2.3	8.6-8.0/4.0	35	8.9	20.0	29.0	Rolled Steel	89.5	77.5	4.12	0.4
GT0013A	5	1765	3.6	14.0-13.2/6.6	55	14.9	36.0	46.0		89.5	80	2.72	0.5
GT0016A	7 1/2	1766	5	21.2-19.8/9.9	60	22.3	49.7	72.4		91	79	1.698	0.98
GT0019A	10	1768	5.7	27.7-25.4/12.7	79	29.7	67.7	89.1		91.7	80.1	1.217	1.0
GT0059	15	1774	9.8	40.5-37.5/18.8	115	44.4	91.0	119.0		93	81	.6729	2.3
GT0062	20	1770	9.8	53.0-48.5/24.3	144	59.4	118.0	146.0		93	83.5	.546	2.8
GT0065	25	1775	15	66.0-62.5/31.0	190	74.0	140.0	195.0		93.6	80	.3657	4.2
GT0067	30	1775	15.5	78.0-73.0/36.5	225	88.8	173.0	235.0		94.1	82	.289	4.8
GT0073	40	1780	20.2	103.0-95.5/47.5	285	118.0	212.0	300.0		94.1	83.5	.209	9.5
GT0077	50	1780	24	127.0-118.0/59.0	350	147.0	257.0	368.0		94.5	84	.158	10.5

Globetrotter TEFC 3-Phase General Purpose Motors

Features

- 208-230/460 Voltage, as noted
- 1800 or 3600 RPM models
- Meets or exceeds NEMA Premium[®] efficiencies
- NEMA Premium models are in compliance with EISA 2007
- Rigid base mount is Cast-iron frame material.
- C-Face with base mount Frame 184-215 is Rolled Steel, Frame 254,265 is cast-iron
- TEFC models are Div 2/Zone 2 Class 1 (gases), Groups A, B, C, D as noted on nameplate
- Steel Conduit Box and Fan Guard.
- Bearing lock Frames 182-286
- Bearing caps Frames 324 and up
- IP55 enclosure on cast-iron frames, IP43 on Rolled Steel.
- Inverter ratings 10:1 variable torque and 2:1 or 10:1 constant torque, as noted.
- 1.15 Service factor on sinewave, 1.0 service factor on IGBT power
- Meets temperature code T2B
- Class F, Class B Rise Insulation
- Standard assembly F1, reversible to F2 assembly
- Dual frame mounting
- UL recognized, CSA certified, CE mark
- Three year warranty (through Regal)

Applications

Typical uses in many commercial and industrial environments such as HVAC, Conveyors, Pumping, and Cooling Towers. Globetrotter provides durability and dependability.



Motor Specifications – 3-Phase											
Part Number*	Price	HP	Base RPM	Volts	Service Factor	Encl.	Frame Material	NEMA Design	NEMA Frame	Weight (lb)	Drawing Links
Rigid Base											
GT1010A	\$591.00	3	1800	208–230/460 VAC	1.15 (sine), 1.0 (drive)	TEFC	Cast-iron	A	182T	97	PDF
GT1013A	\$675.00	5							184T	111	PDF
GT1016A	\$836.00	7 1/2							213T	167	PDF
GT1019A	\$1,104.00	10							215T	183	PDF
GT1022A	\$1,576.00	15							254T	299	PDF
GT1025A	\$1,737.00	20							256T	335	PDF
GT1028A	\$2,112.00	25							284T	400	PDF
GT1031A	\$2,213.00	30						286T	492	PDF	
GT1034A	\$2,827.00	40						B	324T	625	PDF
GT1037A	\$3,013.00	50							326T	680	PDF
GT1040A	\$4,460.00	60							364T	805	PDF
GT1043A	\$5,462.00	75							365T	983	PDF
GT1046A	\$7,106.00	100							405T	1,325	PDF
GT1049A	\$10,183.00	125							444T	1,588	PDF
GT1052A	\$11,163.00	150	445T	1,950	PDF						
GT1055A	\$13,017.00	200	447T	2,300	PDF						
C-Face with Base											
GT1210A	\$595.00	3	1800	230/460 VAC	1.15 (sine), 1.0 (drive)	TEFC	Rolled Steel	B	182TC	97.00	PDF
GT1212A	\$597.00	5	3600							110.00	PDF
GT1213A	\$634.00		1800							110.00	PDF
GT1216A	\$892.00	7 1/2	213TC						150.00	PDF	
GT1218A	\$952.00	10	3600						210.00	PDF	
GT1219A	\$1,030.00		215TC						210.00	PDF	
GT1222A	\$1,599.00	15	1800						254TC	400.00	PDF
GT1225A	\$1,727.00	20	256TC						455.00	PDF	

Motor Shipping Schedule *		
Same or one day *	Up to 7 days	Up to 10 days

Color indicates shipping lead time in business days. Check stock status online.
* Certain heavy and oversized items can be shipped only via LTL. Check our website for current shipping method constraints by part number.



Globetrotter TEFC 3-Phase General Purpose Motors

Performance Data - 3-Phase																
Part Number	HP	F.L. RPM	Current @ 230V/460V (Amps)			Torque (lb-ft)			Torque Speed Rating		F.L. Effic. %	F.L. Power Factor	Resistance Main	Rotor Inertia (lb-ft ²)		
			No Load 460V	Full Load 230/460V	Locked Rotor	Full Load	Locked Rotor	Break-down	Constant	Variable						
Rigid Base																
GT1010A	3	1770	2.6	8.6-8.3/4.2	23	9.0	23.0	33.5	10:1	10:1	89.5	76	3.85	N/A*		
GT1013A	5	1765	3.5	13.2/6.6	53.5	14.9	35.0	46.0			89.5	80	2.75			
GT1016A	7 1/2	1768	4.6	20.6-19.0/9.5	62	22.3	45.0	59.0			93.3	79.3	1.473	0.95		
GT1019A	10	1762	5.6	27.3-25.0/12.5	79	29.8	59.0	74.0			91.7	81.3	1.155	1.1		
GT1022A	15	1772	8.5	40.0-37.5/18.8	113	44.5	91.0	118.0			92.4	82	.6738	2.4		
GT1025A	20	1768	10	53.0-48.5/24.2	144	59.4	119.0	146.0			93	83.5	.513	3.8		
GT1028A	25	1772	11.8	65.0-60.0/30.0	182	74.0	144.0	190.0			93.6	83	.2988	5.2		
GT1031A	30	1770	13	78.0-71.0/35.5	215	89.0	169.0	235.0			93.6	84	.27	5.7		
GT1034A	40	1782	17.5	95.0/47.5	290	118.0	212.0	313.0			2:1	10:1	94.1	84	.18	11.2
GT1037A	50	1782	20.5	117.0/58.5	380	147.0	282.0	410.0					94.5	85	.127	12
GT1040A	60	1782	22.5	138.0/69.0	435	177.0	354.0	451.0					95	85.5	.103	17.2
GT1043A	75	1782	27.5	171.0/85.5	542	221.0	475.0	575.0					95.4	86	.072	20.5
GT1046A	100	1785	36	226.0/113.0	786	294.0	618.0	854.0					95.4	87	.0555	35
GT1049A	125	1790	46.5	140.0	905	367.0	679.0	991.0					95.4	87	.0374	60
GT1052A	150	1790	54	169.0	1085	440.0	926.0	1232.0	95.8	87			.0294	80		
GT1055A	200	1790	69	219.0	1450	587.0	1256.0	1656.0	96.5	89			.0184	88		
C-Face with Base																
GT1210A	3	1790	2.3	8.0/4.0	32	9.0	20.0	29.0	10:1	10:1			89.5	78	3.85	N/A*
GT1212A	5	3515	2.4	12.4/6.2	42	7.5	16.2	23.0	2:1		88.5	86	3.44			
GT1213A		1790	3	13.2/6.6	49.5	15.0	33.0	42.0	10:1		89.5	80	2.75			
GT1216A	7 1/2	1790	4.6	19/9.5	62	22.3	45.0	59.0	10:1		91.7	79.3	1.473			
GT1218A	10	3515	6	27.3-25.0/12.5	77	29.8	65.0	85.0	2:1		91.7	81.3	1.155			
GT1219A		1790	3.9	23.6/11.8	79	14.9	28.0	41.0	2:1		90.2	88	1.218			
GT1222A	15	1790	8.5	37.5/18.8	113	44.5	91.0	118.0	10:1		92.4	82	.6738	2.4		
GT1225A	20	1768	10	48.5/24.2	144	59.4	119.0	146.0	10:1		93	83.5	0.513	3.8		

* Data not available from manufacturer



Jet Pump (Centrifugal), 3-Phase Totally Enclosed Motors

C-Face Footed (Removable Base) 56J

Features

- Service Factor is 1.15
- Double-sealed ball bearings, mechanically locked on shaft end
- Continuous Duty
- Nameplate 60/50 Hz, 190/380 volts at next lower HP, as noted
- 56J = 416 stainless steel threaded shaft with slinger
- UL Recognized, CSA Certified and CE Mark
- Drip cover kit included
- IP43 Rating

Applications

- Replaces 90 volt and 180 volt PMDC motors (when used with AC variable frequency drives)
- Typical uses include: jet pumps and jet pump motor replacements, well pumps, and liquid pumping applications.



Motor Shipping Schedule *

Same or one day *	Up to 7 days	Up to 10 days
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Color indicates shipping lead time in business days. Check stock status online.

* Certain heavy and oversized items can be shipped only via LTL. Check our website for current shipping method constraints by part number.

Motor Specifications – Jet Pump (Centrifugal) 3-Phase Totally Enclosed Motors

Part Number*	Price	HP	Base RPM	Volts	Encl.	NEMA Design	NEMA Frame	Model No.	F.L. Amps	Weight (lb)*	Footnotes	Drawing Links
J061	\$335.00	1/2	3600	208-230 / 460 - 190 / 380	TEFC	B	56J	56T34F5342 D	2.0 - 2.2 / 1.1 - 1.85 / 0.92	23	68	PDF
J063A	\$476.00	1		230 / 460 - 190 / 380				56T34F99029 A	3 / 0 / 1.5 - 2.6 / 1.3	25	68 Nameplate footnote: Suitable for 208V at 60Hz	PDF
J064A	\$589.00	1-1/2		208-230 / 460 - 190 / 380				56T34F99018 A	4.2 - 4.0 / 2.0 - 3.4 / 1.7	26	68	PDF
J065A	\$679.00	2		230 / 460 - 190 / 380				56T34F15592 A	5.0 / 2.5 - 4.6 / 2.3	30	68 Nameplate footnote: Suitable for 208V at 60Hz	PDF
J066A	\$702.00	3		056T34F15601				7.6 / 3.8 - 6.4 / 3.2	48		PDF	

* Refer to the Motor Shipping Schedule table for shipping information.

Certain heavy and oversized items can be shipped only via LTL. Check our website for current shipping method constraints by part number.

Footnotes: 68 = Rated 60/50 hertz, 190/380 or 380 volt at next lower horsepower

Note: Please review the AutomationDirect Terms & Conditions for warranty and service on this product. Warranty service can be arranged through numerous Marathon Electric service centers. See list of service centers on our website at www.automationdirect.com.

Performance Data – Jet Pump (Centrifugal) 3-Phase Totally Enclosed Motors

Part Number	HP	F.L. RPM	Min. RPM	F.L. AMPS @460V	N.L. AMPS @460V	F.L. Torque (lb-ft)	B.D. Torque (lb-ft)	Max. CHP RPM*	Max. Safe RPM	F.L. Effic.	F.L. Power Factor	Rotor Inertia (lb-ft ²)
J061	1/2	3450	345	1.1	0.7	0.76	3.8	2700	4000	66	69.7	0.02
J063A	1			1.5	0.75	1.5	4.8			78.5	79.1	0.023
J064A	1-1/2			2.0	0.9	2.2	9.6			84	83.5	0.045
J065A	2			2.5	1	3.0	12.2			85.5	86	0.065
J066A	3			3.8	1.7	4.5	22.7			87.5	84	0.045

* Maximum Constant HP RPM is for direct-coupled loads.

microMAX™ AC Inverter-Duty Motors

1000:1 Constant Torque (TENV), 20:1 Constant Torque (TEFC)



Features

- Constant torque operation from 0 to base speed (TENV ratings)
- Constant torque operation from 1/20 speed to base speed (TEFC ratings)
- Constant horsepower to twice base speed (RPM)
- Class H insulation with CR200 (corona-resistant) magnet wire
- Continuous duty at 40°C ambient
- C-Face with rigid base, except C-Face with removable rigid base as noted
- Service Factor: 1.0
- Utilizes double shielded ball bearings
- Exxon Polyrex[®] EM bearing grease
- Eliminates brush and commutator maintenance
- Electrically reversible
- UL Recognized, CSA Certified, and CE Mark
- Three year warranty (through Marathon Electric)

Applications

- Replaces 90 volt and 180 volt PMDC motors (when used with AC variable frequency drives)
- Typical uses include: machine tools, conveyors, packaging machines, batching machines, printing equipment, pumps and fans.

Motor Shipping Schedule *

Same or one day *	Up to 7 days	Up to 10 days
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Color indicates shipping lead time in business days. Check stock status online.

* Certain heavy and oversized items can be shipped only via LTL. Check our website for current shipping method constraints by part number.

Prices & Specifications

Motor Specifications – microMAX

Part Number *	Price	HP	Base RPM	Volts	Encl.	NEMA Frame	Model No.	F.L. Amps	Weight (lb) *	Footnotes	Drawing Links		
Y500	\$299.00	1/4	1800	230	TENV	56C	56H17T2011	1.0	17	Q	PDF		
Y502	\$321.00	1/3					56H17T2013A	1.2	17	Q	PDF		
Y360	\$379.00	1/2					56H17T2017	1.8 / 0.9	25	-	PDF		
Y362	\$467.00	3/4					56H17F2017A	2.8 / 1.4	25	-	PDF		
Y364	\$526.00	1					56H17F2021	3.2 / 1.6	28	-	PDF		
Y366	\$654.00	1-1/2		230/460	TENV	145TC	145THTR5329AA	4.8 / 2.4	45	6	PDF		
Y368	\$867.00	2					145THFR5329	5.8 / 2.9	45	6	PDF		
Y1999 †	\$1,111.00	3					TEFC	182TC	182THFW7729AA	8.4 / 4.2	64	6	PDF
Y1372 †	\$1,260.00	5						184TC	184THFW7726AA	13.0 / 6.5	92	6	PDF
Y994	\$1,612.00	7-1/2						213TC	213THFW7726	21.4 / 10.7	125	6	PDF
Y996	\$2,063.00	10	215TC	215THFW7726	27.6 / 13.8	135	6	PDF					

* Refer to the Motor Shipping Schedule table for shipping information.

Certain heavy and oversized items can be shipped only via LTL. Check our web site for current shipping method constraints by part number.

† Detailed information on the previous versions of these motors (Y999 & Y372) can be found at www.AutomationDirect.com/Retired-Products.

Footnotes: Q = "Quick Connect" terminal board (1/4-in female spade lug) 6 = Bolt-on, removable base for footless mounting option

Note: Please review the AutomationDirect Terms & Conditions for warranty and service on this product. Warranty service can be arranged through numerous Marathon Electric service centers. See list of service centers on our Web site at www.automationdirect.com.

microMAX™ AC Inverter-Duty Motors

Performance Data

Performance Data (460 Volt except as indicated) – microMAX													
Part Number	HP	NEMA Design	F.L. RPM	Min. RPM	F.L. AMPS @460V	N.L. AMPS @460V	F.L. Torque (lb-ft)	B.D. Torque (lb-ft)	Max. CHP RPM*	Max. Safe RPM	F.L. Effic.	F.L. Power Factor	Rotor Inertia (lb-ft ²)
Y500	1/4 (230V)	B	1725	1.8	1.0 (230V)	0.7 (230V)	0.75	3.7	3520	5400	72.0	65.0	0.040
Y502	1/3 (230V)	A	1725	0	1.2 (230V)	0.9 (230V)	1.0	4.5	3450	5400	74.0	67.0	0.045
Y360	1/2	B	1725	1.8	0.9	0.5	1.5	6.8	3520	5400	80.0	72.0	0.075
Y362	3/4	A	1725	90	1.4	1.0	2.3	9.5	3520	4000	75.5	70.5	0.055
Y364	1	B	1725	90	1.6	0.9	3.0	12.0	3520	4000	78.5	77.5	0.090
Y366	1-1/2	A	1755	0	2.4	1.6	4.5	29.0	3500	5400	85.5	69.0	0.140
Y368	2	B	1740	90	2.9	1.6	6.0	29.0	3530	4000	82.5	77.0	0.140
Y1999	3	A	1765	90	4.2	2.2	8.9	33.8	3530	4000	87.5	76.4	0.38
Y1372	5		1760	90	6.5	2.8	15	48.6	3520	4000	87.5	81.6	0.357
Y994	7-1/2		1770	90	10.7	6.2	22.3	80.0	3565	4000	89.5	72.5	0.75
Y996	10	B	1770	90	13.8	7.8	30.0	110	3570	4000	91.0	74.0	1.00

* Maximum Constant HP RPM is for direct-coupled loads.



MAX+ AC Inverter-Duty Motors with Encoder

1000:1 Constant Torque (TENV)



Features

- Integrated Dynapar HS20 1024 ppr encoder
- Optimized for operation with IGBT inverter
- Constant Torque operation from 0 to base speed on Vector Drive
- Constant Horsepower operation up to twice base RPM
- Class F insulation with CR200 corona resistant magnet wire
- Continuous duty at 40°C ambient
- C-Face with rigid base, except C-Face with removable rigid base as noted
- Service Factor: 1.0
- Ball bearings
- F1 mounting (except as noted)
- UL Recognized, CSA Certified, and CE Mark
- Three year warranty (through Marathon Electric)

Applications

- Replaces 90 volt and 180 volt PMDC motors (when used with AC variable frequency drives)
- Typical uses include: machine tools, conveyors, packaging machines, batching machines, printing equipment, pumps and fans.

Motor Shipping Schedule *		
Same or one day *	Up to 7 days	Up to 10 days

Color indicates shipping lead time in business days. Check stock status online.

* Certain heavy and oversized items can be shipped only via LTL. Check our website for current shipping method constraints by part number.

Prices & Specifications

Motor Specifications – MAX+ (with encoder)												
Part Number *	Price	HP	Base RPM	Volts	Encl.	NEMA Frame	Model No.	F.L. Amps	Weight (lb) *	Footnotes	Drawing Links	
Y280	\$1,166.00	1/2	1800	230/460	TENV	56C	56H17T15526A	1.6 / 0.8	25	6	PDF	
Y281	\$1,220.00	3/4					56H17T15528A	2.4 / 1.2	35	6	PDF	
Y282	\$1,291.00	1					56H17T15527A	3.0 / 1.5	42	6	PDF	
Y284	\$1,537.00	1-1/2				145TC	145THTR15540AA	4.8 / 2.4	45	6	PDF	
Y285	\$2,063.00	2					145THTN17034AA	6.0 / 3.0	68	13b	PDF	
Y286A	\$2,617.00	3					182TC	182THTY17041AA	8.2 / 4.1	110	13b	PDF
Y287A	\$2,831.00	5					184TC	184THTY17038AA	13.4 / 6.7	125	13b	PDF

* Refer to the Motor Shipping Schedule table for shipping information.

Certain heavy and oversized items can be shipped only via LTL. Check our web site for current shipping method constraints by part number.

Footnotes: 6 = Bolt-on, removable base for footless mounting option 13b = Field reversible from F1 to F2 mounting

Note: Please review the AutomationDirect Terms & Conditions for warranty and service on this product. Warranty service can be arranged through numerous Marathon Electric service centers. See list of service centers on our Web site at www.automationdirect.com.

MAX+ Motors Shaft-Mounted Encoder*

A Dynapar Model HS20 shaft-mounted encoder is supplied with the MAX+ motor. The 5/8-in hollow-shaft encoder requires a 5–26 VDC power source, provides a count of 1024 pulses per revolution (PPR), differential line driver output, and includes 10 screw-terminal wiring connections.

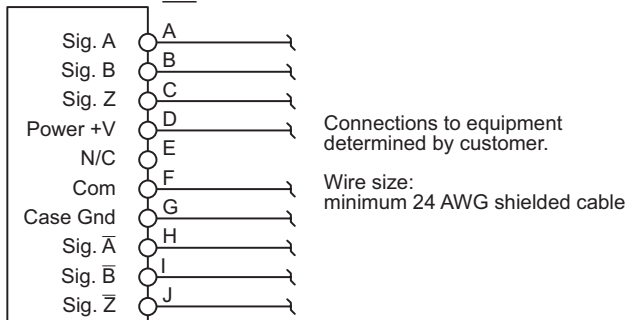
* The encoder cable gland accepts cable diameters from 0.187–0.30 in.

* There is no manufacturer's published tightening torque for the encoder screw terminals.

* If connecting the motor to a GS3 DURApulse AC drive, a [GS3-FB Feedback Card](#) is required for the drive.

Encoder Wiring Connections

Dynapar HS20 Encoder PIN



MAX+ AC Inverter-Duty Motors with Encoder

Performance Data

Performance Data (460 Volt) – MAX+													
Part Number	HP	NEMA Design	F.L. RPM	Min. RPM	F.L. AMPS @460V	N.L. AMPS @460V	F.L. Torque (lb-ft)	B.D. Torque (lb-ft)	Max. CHP RPM*	Max. Safe RPM	F.L. Effic.	F.L. Power Factor	Rotor Inertia (lb-ft ²)
Y280	1/2	A	1725	0	0.8	0.5	1.5	5.8	3510	5400	80.0	72.0	0.06
Y281	3/4	A	1725		1.2	0.8	2.3	10.2	3450		82.5	73.5	0.09
Y282	1	A	1725		1.5	1.0	3.0	15.0	3505		84.0	75.0	0.11
Y284	1-1/2	B	1755		2.4	1.6	4.5	29.0	3500		85.5	69.0	0.14
Y285	2	B	1750		3.0	1.7	6.0	28.5	3525		85.5	78.0	0.13
Y286A	3	B	1755		4.1	2.3	9.0	49.3	3510		87.5	78.5	0.42
Y287A	5	B	1760		6.7	3.2	14.9	61.5	3520		89.5	79.0	0.52

* Maximum Constant HP RPM is for direct coupled loads.

Black Max[®] Vector Duty Motors

*** 230/460V and 575V Motors Available ***



Motor Shipping Schedule *

Same or one day * Up to 7 days Up to 10 days

Color indicates shipping lead time in business days. Check stock status online.

* Certain heavy and oversized items can be shipped only via LTL. Check our website for current shipping method constraints by part number.

Features

- Class F MAX GUARD[®] insulation system
- Constant torque operation from 0 to base speed on vector drive
- Constant horsepower operation to twice base RPM
- Continuous duty at 40° C ambient
- Optimized for operation with IGBT inverter (NEMA Design A)
- Class F N/C thermostats (one per phase)
- Utilizes double shielded ball bearings
- Exxon Polyrex[®] EM bearing grease
- C-Face with rigid base, except C-Face with removable rigid base as noted
- F1 standard conduit box location, field reversible to F2 (except as noted)
- Available with optional encoder installed on opposite drive end
- Electrically reversible
- UL Recognized, CSA Certified, and CE Mark
- Three year warranty (through Marathon Electric)

Applications

- Designed for inverter or vector applications where up to a 1000:1 constant torque speed range is required.
- Typical uses include: material handling, machine tools, conveyors, crane and hoist, metal processing, test stands, pumps, compressors, textile processing, and other industrial machinery installed in dusty or dirty environments.

230/460V Motor Specifications

Part Number *	Price	HP	Base RPM	Volts	Enclosure	NEMA Frame	Model No.	F.L. Amps	Weight (lb) *	Footnotes	Drawing Links
Y592	\$476.00	1/4	1800	230/460	TENV	56C	56H17T2001	1.2 / 0.6	19	T, S, 13	PDF
Y534	\$602.00	1/2	1800	230/460	TENV	56C	56H17T5301	1.6 / 0.8	28	T, S, 6, 13	PDF
Y535	\$718.00	1	1800	230/460	TENV	56C	56H17T5302	3.0 / 1.5	41	T, S, 6, 13	PDF
Y536	\$738.00	1	1800	230/460	TENV	143TC	143THTR5326	3.0 / 1.5	43	T, S, 6, 13	PDF
Y537	\$854.00	1	1200	230/460	TENV	145TC	145THTR5376	3.8 / 1.9	49	T, S, 6, 13	PDF
Y538	\$896.00	1-1/2	1800	230/460	TENV	145TC	145THTR5326	4.8 / 2.4	50	T, S, 6, 13	PDF
Y551	\$1,237.00	2	1800	230/460	TENV	145TC	145HTN6046	6.0 / 3.0	72	T, CI	PDF
Y540	\$1,675.00	2	1200	230/460	TENV	184TC	184HTL7776	6.6 / 3.3	88	T, AL	PDF
Y541A	\$1,478.00	3	1800	230/460	TENV	182TC	182HTY7726	8.2 / 4.1	110	T, AL	PDF
Y542	\$2,062.00	3	1200	230/460	TENV	213TC	213HTL7776	9.4 / 4.7	118	T, AL	PDF
Y543A	\$1,768.00	5	1800	230/460	TENV	184TC	184HTY7726	13.4 / 6.7	125	T, AL	PDF
Y544	\$2,510.00	5	1200	230/460	TENV	215TC	215HTL7776	15.4 / 7.7	138	T, AL	PDF
Y545	\$2,276.00	7-1/2	1800	230/460	TENV	213TC	213HTL7726	21.0 / 10.5	146	T, AL	PDF
Y546	\$3,375.00	7-1/2	1200	230/460	TENV	254TC	254HTL5776	22.0 / 11.0	209	T, AL	PDF
Y547	\$2,722.00	10	1800	230/460	TENV	215TC	215HTL7726	27.0 / 13.5	159	T, AL	PDF
Y548	\$3,821.00	10	1200	230/460	TENV	256TC	256HTL5776	28 / 14	203	T, AL	PDF
Y549	\$3,236.00	15	1800	230/460	TENV	254TC	254HTL5726	40 / 20	250	T, AL, I	PDF
Y552	\$4,727.00	20	1800	230/460	TENV	256TC	256HTNA7026	52 / 26	300	T, I, CI	PDF
Y553	Retired	25	1800	230/460	TENV	284TC	284HTNA7026	62 / 31	495	T, I, CI	PDF
Y393	Retired	30	1800	230/460	TENV	286TC	286HTNA7026	74 / 37	575	T, I, CI	PDF

* Refer to the Motor Shipping Schedule table for shipping information.

Footnotes:

6 Bolt-on, removable base for footless mounting option
13 F1 Mounting Only, cannot modify to F2
AL Aluminum Frame Construction

Footnotes (continued):

CI Cast-iron Frame Construction
I Intermittent duty from 90-120 Hz operation
S Steel Frame Construction

Footnotes (continued):
T Thermostat overload

Note: Please review the AutomationDirect Terms & Conditions for warranty and service on his product.

Warranty service can be arranged through numerous Marathon Electric service centers. See list of service centers on our Web site at www.AutomationDirect.com.

Black Max[®] Vector Duty Motors

Motor Shipping Schedule *		
Same or one day *	Up to 7 days	Up to 10 days

Color indicates shipping lead time in business days. Check stock status online.

* Certain heavy and oversized items can be shipped only via LTL. Check our website for current shipping method constraints by part number.

575V Motor Specifications											
Part Number	Price	HP	Base RPM	Volts	Enclosure	NEMA Frame	Model No.	F.L. Amps	Weight (lb)	Footnotes	Drawing Links
Y555	\$602.00	1/2	1800	575	TENV	56C	56H17T5311	0.64	28	T, S, 6, 13	PDF
Y556	\$718.00	1	1800	575	TENV	56C	56H17T5312	1.2	41	T, S, 6, 13	PDF
Y557	\$1,237.00	2	1800	575	TENV	145TC	145THTN6060	2.4	72	T, CI	PDF
Y558A	\$1,451.00	3	1800	575	TENV	182TC	182THTY7736	3.3	110	T, AL	PDF
Y559A	\$1,734.00	5	1800	575	TENV	184TC	184THTY7736	5.4	125	T, AL	PDF
Y560	\$2,276.00	7-1/2	1800	575	TENV	213TC	213THTL7736	8.4	146	T, AL	PDF
Y561	\$2,722.00	10	1800	575	TENV	215TC	215THTL7736	10.8	159	T, AL	PDF
Y562	Retired	15	1800	575	TENV	254TC	254THTL5736	16.0	250	T, AL, I	PDF
Y563	Retired	20	1800	575	TENV	256TC	256THTNA7036	20.8	300	T, CI, I	PDF

Footnotes:

- 6 Bolt-on, removable base for footless mounting option
- 13 F1 Mounting Only, cannot modify to F2
- AL Aluminum Frame Construction

Footnotes (continued):

- CI Cast-iron Frame Construction
- I Intermittent duty from 90-120 Hz operation
- S Steel Frame Construction
- T Thermostat overload

Note: Please review the AutomationDirect Terms & Conditions for warranty and service on this product. Warranty service can be arranged through numerous Marathon Electric service centers. See list of service centers on our Web site at www.AutomationDirect.com.

Motor with Shaft-Mounted Encoder*

A Dynapar Model HS35 shaft-mounted encoder can be supplied pre-installed on the motors as shown in the price table below. The encoder requires a 5–26 VDC power source, provides a count of 1024 pulses per revolution (PPR) differential line driver output, and includes a 10-pin mating connector.

* If connecting the motor to a GS3 DURApulse AC drive, a [GS3-FB Feedback Card](#) is required for the drive.

Motor Accessories		
Part Number	Price	Description *
A772	\$1,176.00	Encoder kit, replacement, for Black Max encoder motors. Dynapar HS35 encoder, 5–26 VDC input, Line Driver output, 1024 pulses per revolution, 5/8-in bore.

* Replacement/spare encoder kit for Black Max Yxxx-A772 motors; can also be field installed on Black Max Yxxx motors without encoders.

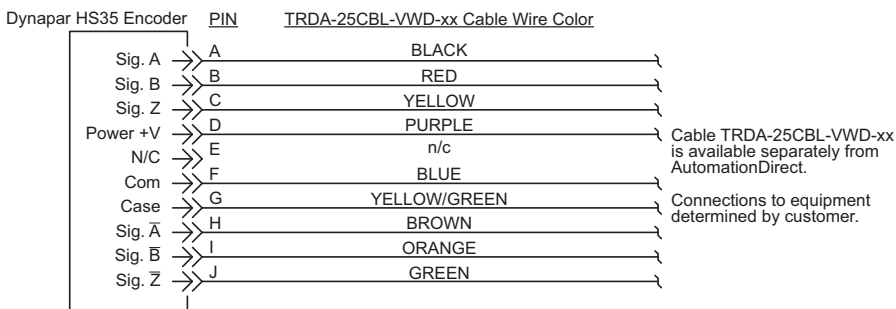
Motor with Pre-installed Shaft-Mounted Encoder								
230/460V Motors						575V Motors		
Part Number	Price	HP	Part Number	Price	HP	Part Number	Price	HP
Y592-A772	\$1,605.00	1/4	Y544-A772	\$3,763.00	5	Y557-A772	\$2,395.00	2
Y534-A772	\$1,833.00	1/2	Y545-A772	\$3,533.00	7 1/2	Y558A-A772	\$2,276.00	3
Y535-A772	\$1,936.00	1	Y546-A772	\$4,614.00	7 1/2	Y559A-A772	\$3,002.00	5
Y536-A772	\$1,953.00	1	Y547-A772	\$3,973.00	10	Y560-A772	\$3,533.00	7 1/2
Y537-A772	\$2,056.00	1	Y548-A772	\$5,052.00	10	Y561-A772	\$3,973.00	10
Y538-A772	\$2,189.00	1 1/2	Y549-A772	\$4,480.00	15	Y562-A772	Retired	15
Y551-A772	\$2,395.00	2	Y552-A772	Retired	20	Y563-A772	Retired	20
Y540-A772	\$2,944.00	2	Y553-A772	Retired	25			
Y541A-A772	\$2,726.00	3	Y393-A772	Retired	30			
Y542-A772	\$3,325.00	3	Y555-A772	\$1,833.00	1/2			
Y543A-A772	\$3,002.00	5	Y556-A772	\$1,936.00	1			

Note: Please review the AutomationDirect Terms & Conditions for warranty and service on this product. Warranty service can be arranged through numerous Marathon Electric service centers. See list of service centers on our Web site at www.AutomationDirect.com.

Black Max[®] Vector Duty Motors

Encoder Connector Pinout

Note: A mating connector is supplied with the encoder. Prewired cables TRDA-25CBL-VWD-xx (10, 20, & 30 ft) and replacement MS connectors TRDA-25CON-VWD are available from AutomationDirect.



Motor Performance Data (460 Volt) *																
Part Number	HP	F.L. rpm	F.L. Amps @460V	N.L. Amps @460V	F.L. Torque (lb-ft)	B.D. Torque (lb-ft)	Max. C hp rpm *	Max. Safe rpm	F.L. Effic. (%)	F.L. Power Factor	Rotor Inertia (lb-ft ²)	Ohms/Ph - Equiv. Wye Circuit (460 VAC) (at rated operating temp. in 40° C ambient)				
												R1	R2	X1	X2	XM
Y592	1/4	1755	0.6	0.45	0.75	4.5	3540	5400	70.0	58.0	0.045	26.300	23.000	30.240	14.700	572.000
Y534	1/2	1735	0.8	0.52	1.5	5.8	3510	5400	80.0	72.0	0.056	22.307	17.028	24.123	18.163	532.976
Y535	1	1750	1.5	1.0	3.0	15.0	3505	5400	84.0	75.0	0.110	8.378	5.623	10.707	9.912	278.036
Y536	1	1750	1.5	1.0	3.0	15.0	3505	5400	84.0	75.0	0.110	8.378	5.623	10.707	9.912	278.036
Y537	1	1145	1.9	1.3	4.5	16.0	2260	5400	80.0	62.5	0.140	10.302	8.372	13.793	15.325	193.835
Y538	1-1/2	1755	2.4	1.6	4.5	29.0	3518	5400	85.5	69.0	0.140	4.257	3.538	5.998	5.884	161.009
Y551	2	1750	3.0	1.7	6.0	28.5	3525	5400	85.5	78.0	0.130	3.834	2.897	5.950	5.637	154.800
Y540	2	1160	3.3	2.1	9.0	34.0	2315	5400	82.5	67.5	0.380	3.948	3.436	7.725	12.113	116.900
Y541A	3	1755	4.1	2.3	9.0	49.3	3515	5400	87.5	78.5	0.420	1.578	1.802	2.838	2.091	94.13
Y542	3	1158	4.7	3.0	13.6	49.0	2300	4200	82.5	72.5	0.600	2.469	2.318	6.508	4.125	83.910
Y543A	5	1760	6.7	3.2	14.9	61.5	3520	5400	89.5	79	0.520	1.428	1.05	2.09	3.379	63.334
Y544	5	1165	7.7	4.8	22.5	87.0	2320	4200	84.0	71.0	0.900	1.130	1.250	3.709	2.573	51.972
Y545	7-1/2	1765	10.5	5.5	22.3	95.5	3525	4200	90.2	76.0	0.850	0.699	0.567	1.765	2.260	38.178
Y546	7-1/2	1170	11.0	6.0	34.0	118.0	2325	4200	87.5	73.0	1.200	0.510	0.680	2.846	3.247	42.714
Y547	10	1774	13.5	7.4	29.5	125.0	3540	4200	90.2	76.0	1.300	0.369	0.334	1.423	2.281	34.932
Y548	10	1160	14	7.0	45.5	135.0	2320	4200	89.5	75.5	1.500	0.534	0.693	2.258	2.323	30.530
Y549	15	1765	20	11.0	45.0	170.0	3550	4200	92.4	76.0	1.600	0.134	0.316	1.047	1.569	22.151
Y552	20	1768	26	13.5	59.5	290.0	3560	5400	93.6	80.0	3.100	0.234	0.213	0.746	0.689	18.204
Y553	25	1770	31	14.0	74.2	330.0	3530	3600	93.6	75.0	4.400	0.143	0.160	0.724	0.678	13.965
Y393	30	1772	37	23.5	89.0	375.0	3560	3600	94.5	74.0	5.500	0.113	0.123	0.543	0.557	11.200

* Maximum Constant hp rpm is for direct coupled loads.

Motor Performance Data (575 Volt) *																
Part Number	HP	F.L. rpm	F.L. Amps @575V	N.L. Amps @575V	F.L. Torque (lb-ft)	B.D. Torque (lb-ft)	Max. C hp rpm*	Max. Safe rpm	F.L. Effic. (%)	F.L. Power Factor	Rotor Inertia (lb-ft ²)	Ohms/Ph - Equiv. Wye Circuit (575 VAC) (at rated operating temp. in 40° C ambient)				
												R1	R2	X1	X2	XM
Y555	1/2	1735	0.8	0.8	1.52	5.8	3510	5400	80.0	72	0.056	22.307	17.028	24.123	18.163	532.976
Y556	1	1750	1.6	0.8	3.0	15.0	3505	5400	84.0	75	0.11	8.378	5.623	10.707	9.912	278.036
Y557	2	1750	2.4	1.6	6.0	28.5	3525	5400	85.5	78	0.13	3.834	2.897	5.950	5.637	154.780
Y558A	3	1755	3.3	1.8	9.0	49.3	3515	5400	87.5	78.5	0.42	1.578	1.802	2.838	2.091	94.13
Y559A	5	1760	5.4	2.6	14.9	61.5	3520	5400	89.5	79	0.52	1.4288	1.0489	2.092	3.379	63.3339
Y560	7-1/2	1765	8.0	4.8	22.3	95.5	3525	4200	90.2	76	0.9	0.699	0.567	1.765	2.260	38.178
Y561	10	1774	11.2	5.6	29.6	125.0	3540	4200	90.2	76	1.3	0.284	0.284	1.420	2.272	34.932
Y562	15	1765	16.0	8.8	44.6	170.0	3550	4200	92.4	76	1.6	0.314	0.316	1.047	1.569	22.151
Y563	20	1770	20.8	11.2	59.5	290.0	3560	3600	93.6	77	3.5	0.220	0.192	0.675	0.684	18.204

* Maximum Constant hp rpm is for direct coupled loads.

marathon[®]
Motors

Blue Max[®] 2000 Vector Duty Motors



Motor Shipping Schedule *

Same or one day * Up to 7 days Up to 10 days

Color indicates shipping lead time in business days. Check stock status online.

* Certain heavy and oversized items can be shipped only via LTL.

Check our website for current shipping method constraints by part number.

Features

- Class H MAX GUARD[®] insulation system
- Constant torque operation from 0 to base speed on vector drive, including TEFC (on V/Hz drives, TEFC motors are limited to 20:1 constant torque)
- Constant horsepower operation to 1.5 times base RPM
- Continuous duty at 40°C ambient
- Optimized for operation with IGBT inverter (NEMA Design A)
- C-Face foot mount through 100 HP (NEMA frame type TC motors)
- Class F N/C thermostats (one per phase)
- Cast-iron frame and brackets
- Utilizes double shielded ball bearings with Exxon Polyrex[®] EM grease
- "Class B" temperature rise on blower-cooled motors
- F1 standard conduit box location, field reversible to F2
- Available with optional encoder installed on opposite drive end
- Electrically reversible
- UL Recognized, CSA Certified, and CE Mark
- Three year warranty (through Marathon Electric)

Applications

Designed for inverter or vector applications. Typical uses include: material handling, machine tools, conveyors, crane and hoist, metal processing, test stands, pumps, compressors, textile processing, and other industrial machinery installed in dusty or dirty environments where cast-iron construction is required.

Motor Specifications

Part Number *	Price	HP	Base RPM	Volts	Encl.	NEMA Frame	Model No.	F.L. Amps	Weight (lb) *	Drawing Links
Y571	\$6,403.00	40	1800	230/460	TEFC	324T	324THFPA8028	100 / 50.0	540	PDF
Y513	\$7,984.00	40	1800	230/460	TEBC	324TC	324THFPA8038	100 / 50.0	620	PDF
Y572	\$7,922.00	50	1800	230/460	TEFC	326T	326THFS8028	121 / 60.5	540	PDF
Y514	\$9,152.00	50	1800	230/460	TEBC	326TC	326THFPA8038	120 / 60.0	640	PDF
Y573	\$10,213.00	60	1800	230/460	TEFC	364T	364THFS8036	147 / 73.5	965	PDF
Y515	\$11,204.00	60	1800	230/460	TEBC	364TC	364THFS8046	147 / 73.5	1062	PDF
Y574	\$11,704.00	75	1800	230/460	TEFC	365T	365THFS8036	184 / 92.0	1006	PDF
Y516	\$13,555.00	75	1800	230/460	TEBC	365TC	365THFS8046	180 / 90.0	1106	PDF
Y575	\$16,632.00	100	1800	230/460	TEFC	405T	405THFS8036	230 / 115	1308	PDF
Y517	\$19,289.00	100	1800	230/460	TEBC	405TC	405THFS8046	230 / 115	1429	PDF

* Refer to the Motor Shipping Schedule table for shipping information

Note: Please review the AutomationDirect Terms & Conditions for warranty and service on this product.

Warranty service can be arranged through Marathon Electric service centers. See list of service centers on our Web site at www.AutomationDirect.com.

Performance Data (460 Volt)

Part Number	HP	F.L. RPM	F.L. Amps @460V	N.L. Amps @460V	F.L. Torque (lb-ft)	B.D. Torque (lb-ft)	Max. CHP RPM*	Max. Safe RPM	F.L. Effic.	F.L. Power Factor	Rotor Inertia (lb-ft ²)	Ohms/Ph - Equiv. Wye Circuit (460 VAC) (at rated operating temp. in 40° C ambient)				
												R1	R2	X1	X2	XM
Y571	40	1770	50.0	20.0	118.0	320.0	2642	3600	91.7	81.5	5.000	0.082	0.077	0.435	0.592	10.280
Y513	40	1770	50.0	20.0	118.0	320.0	2642	3600	91.7	81.5	5.000	0.082	0.077	0.435	0.592	10.280
Y572	50	1780	60.5	26.5	148.0	400.0	2675	3600	92.4	81.0	10.000	0.063	0.046	0.424	0.596	10.000
Y514	50	1765	60.0	25.0	149.0	525.0	3525	3600	93.0	83.5	5.500	0.088	0.092	0.437	0.358	9.662
Y573	60	1782	73.5	28.0	177.0	525.0	2665	2700	91.7	83.0	14.500	0.063	0.042	0.338	0.455	8.850
Y515	60	1782	74.0	28.0	177.0	525.0	2665	2700	91.7	83.0	14.500	0.063	0.042	0.338	0.455	8.850
Y574	75	1780	92.0	40.0	221.0	740.0	2665	2700	94.1	82.0	16.500	0.047	0.031	0.267	0.313	6.275
Y516	75	1780	90.0	33.0	222.0	645.0	2685	2700	93.0	84.0	16.000	0.054	0.038	0.299	0.420	8.203
Y575	100	1785	115.0	38.0	295.0	900.0	2675	2700	94.5	86.5	27.500	0.034	0.021	0.236	0.219	6.820
Y517	100	1785	115.0	38.0	295.0	900.0	2675	2700	94.5	86.5	27.500	0.034	0.021	0.236	0.219	6.816

* Maximum Constant HP RPM is for direct coupled loads.

Blue Max[®] 2000 Vector Duty Motors

Blower Motor Performance Data (for TEBC Blower Cooled Motors)										
Blower Fits Motor Type				Blower Motor Characteristics						
Part Number	Model No.	NEMA Frame	Encl.	HP (60/50Hz)	RPM (60/50Hz)	Volts	Hz	F.L. Amps	Sound Pressure	Watts
<u>Y513</u>	324THFPA8038	324TC	TEBC	1 / 0.75	1735 / 1460	230/460 – 190/380	60 / 50	3.0 / 1.5	40	850
<u>Y513-A775</u>										850
<u>Y514</u>	326THFPA8038	326TC								851
<u>Y514-A775</u>										852
<u>Y515</u>	364THFS8046	364TC						3.7 / 1.85	68	853
<u>Y515-A775</u>										854
<u>Y516</u>	365THFS8046	365TC								855
<u>Y516-A775</u>										856
<u>Y517</u>	405THFS8046	405TC						857		
<u>Y517-A775</u>								858		

Encoder shaft-mounted to motor*

A Dynapar Model HS35/HSD38 shaft-mounted encoder can be supplied pre-installed on the selected motor, either TEFC or TEBC type, as shown in the table below. The encoder requires a 5–26 VDC power source**, provides a count of 1024 pulses per revolution (PPR) differential line driver output, and includes a 10-pin connector. A mating connector is supplied with TEFC (totally enclosed fan cooled) motor encoders; the customer is responsible for supplying the wiring cable and determining the connections to the equipment being used in the application. The encoder adds 1 inch to the TEFC motor's "C" dimension as shown in the dimensional diagram.

The TEBC (totally enclosed blower cooled) motor encoders have the mating connector pre-wired, installed and ending in a pigtail located inside a conduit box mounted on the motor. (See Figure 2 under the motor dimensional information on the next page.) The customer is responsible for determining the connections to the equipment being used in their application.

* If connecting the motor to a DURApulse AC drive, a GS3-FB Feedback Card is required for the drive.

** When used with a GS3-FB equipped DURApulse AC drive, the GS3-FB will supply power to the encoder.

Motor Shipping Schedule *		
Same or one day *	Up to 7 days	Up to 10 days

Color indicates shipping lead time in business days. Check stock status online.

* Certain heavy and oversized items can be shipped only via LTL.

Check our website for current shipping method constraints by part number.

Motor Accessories		
Part Number	Price	Description *
<u>A774</u>	\$1,149.00	Encoder kit, replacement, for Blue Max TEFC encoder motors. Dynapar HS35 encoder, 5–26 VDC input, Line Driver output, 1024 pulses per revolution, 1-in bore.
<u>A775</u>	\$1,149.00	Encoder kit, replacement, for Blue Max TEBC encoder motors. Dynapar HSD38 encoder, 5–26 VDC input, Line Driver output, 1024 pulses per revolution. 1-in bore.

* Replacement/spare encoder kit for Blue Max Y5xx-A774 and Y5xx-A775 motors; can also be field installed on Blue Max Y5xx motors; select appropriate encoder kit per motor fan type (TEFC or TEBC).

Motor with Pre-installed Shaft-Mounted Encoder					
Part Number	Price	HP	Part Number	Price	HP
<u>Y571-A774</u>	Retired	40 (TEFC)	<u>Y574-A774</u>	\$12,636.00	75 (TEFC)
<u>Y513-A775</u>	\$9,117.00	40 (TEBC)	<u>Y516-A775</u>	\$14,433.00	75 (TEBC)
<u>Y572-A774</u>	\$9,055.00	50 (TEFC)	<u>Y575-A774</u>	\$17,370.00	100 (TEFC)
<u>Y514-A775</u>	\$10,266.00	50 (TEBC)	<u>Y517-A775</u>	\$19,905.00	100 (TEBC)
<u>Y573-A774</u>	\$11,305.00	60 (TEFC)			
<u>Y515-A775</u>	\$12,281.00	60 (TEBC)			

Note: Please review the AutomationDirect Terms & Conditions for warranty and service on this product. Warranty service can be arranged through numerous Marathon Electric service centers. See list of service centers on our Web site at www.AutomationDirect.com.

Encoder Connector Pinout

Note: A mating connector is supplied loose for the customer's wiring on encoder equipped TEFC motors and a mating connector pre-wired to a cable and pigtailed in a conduit box on encoder equipped TEBC motors.

Prewired cables TRDA-25CBL-VWD-xx (10, 20, & 30 ft) and replacement MS connectors TRDA-25CON-VWD are available from AutomationDirect.

Dynapar HS35/HSD38 Encoder

PIN TRDA-25CBL-VWD-xx Cable Wire Color for HS35 Encoders

(HSD38 colors may be different)



SYMAX PMAC 3-Phase Permanent Magnet Motors

Permanent Magnet AC motors are designed to be used only with a PMAC compatible VFD. They provide a small footprint and high efficiency at lower speeds/partial loads to save space, power, and money.

Features

- Operation with a PMAC compatible VFD only. Applicable AutomationDirect drive series are GS20, ACN, or CFW500
- 230/460 VAC
- 6 pole, Interior Permanent Magnet (IPM) construction, base speed is 1800 or 1200 RPM, as noted.
- 25% - 40% Efficiency improvement vs standard induction motor.
- Maintains high efficiency under partial load
- 56 Frame-Premium Efficiency (IE3) ; 182 & larger frames-Super Premium Efficiency (IE4)
- "Performance Matched" to all leading brands of PWM drives guaranteeing years of trouble free operation

- TENV/TEFC - Operational to 20:1 constant torque open-loop
- Constant torque from 0 to base speed.
- Lower operating temperature for higher reliability
- Superior low speed torque and excellent torque linearity
- Wide voltage/frequency range meeting global requirements
- High power density (small footprint), low weight design
- Three year warranty (through Regal)
- UL recognized.
- CSA and CE as noted.

Motor Shipping Schedule *		
Same or one day *	Up to 7 days	Up to 10 days

Color indicates shipping lead time in business days. Check stock status online.
* Certain heavy and oversized items can be shipped only via LTL.
Check our website for current shipping method constraints by part number.

Applications

Typical uses in industrial and commercial pump, fan, or conveyor VFD applications that require high efficiency at various speeds.

Motor Specifications – 3-Phase											
Part Number*	Price	HP	Base RPM*	Volts	Service Factor	Encl.	NEMA Design	NEMA Frame	Frame Material	Weight (lb)	Drawing Links
C-Face with Rigid Base											
SY001	\$611.00	1/2	1800	230/460 VAC	1.0	TENV	N/A	S56C	Rolled Steel	12	PDF
SY003	\$710.00	1						S56C		20	PDF
SY004	\$864.00	1 1/2						S56C		26	PDF
SY005	\$1,160.00	2						S56C		31	PDF
SY007A	\$1,689.00	5	1200	230/460 VAC	1.0	TEFC	N/A	184TC	Cast-iron	154	PDF
SY036	\$1,754.00	3						182TC		Rolled Steel	116
SY066	\$1,389.00	3	184TC	110	PDF						
SY067	\$1,701.00	5	1800	184TC	130	PDF					
SY068	\$1,804.00	7 1/2	213TC	125	PDF						
SY069	\$1,916.00	10	1800	215TC	139	PDF					



*Base RPM at 90Hz for 1800RPM and 60Hz for 1200RPM motors.

Performance Data - 3-Phase																			
Part Number	HP	F.L. RPM	Max RPM	Current @ 230V/460V (Amps)			Torque (lb-ft)			F.L. Effic. %	F.L. Power Factor	Resistance Main	Rotor Inertia (lb-ft ²)	"Ohms/Ph - Equiv. Wye Circuit (460 VAC) (at rated operating temp. in 40° C ambient)"					
				No Load 460V	Full Load 230/460V	Locked Rotor	Full Load	Locked Rotor	Break-down					R1	R2	Ld1	Ld2	Lq1	Lq2
SY001	1/2	1800	2160	0.3	1.9/0.80		1.46			83	80	0	3.17	3.3	13.2	17.3	69	40.6	162
SY003	1	1800	2160	0.1	3.44/1.71		2.92			87	80	0	6.19	1.07	4.28	9.9	39.7	21	84.9
SY004	1 1/2	1800	2160	0.3	5.4/ 2.7		4.38			86	80	0	9.22	5.3	2.12	5.44	21.8	12.62	50.5
SY005	2	1800	2160	0.9	6.7/3.55		5.82			86	80	0	11.8	0.38	1.5	4.46	17.8	10.7	42.8
SY007A	5	1800	2160	0.5	11.6/5.8		14.6			94.9	86	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SY036	3	1200	4000	0.6	7.0/3.5	N/A*	13.1	N/A*	N/A*	93	86	0	0.46	0.435	1.74	9.86	39.4	12.1	48.3
SY066		1800	2250	0.5	6.6/3.3		8.75			91.4	85	0	0.19	0.71	2.84	11.95	47.8	23.23	92.9
SY067	5	1800	2250	0.45	11.6/5.8		14.6			93.9	85.7	0	0.46	0.8	0.2	17.2	4.3	34.6	8.7
SY068	7 1/2	1800	2250	0.4	17.2/8.6		21.87			94.1	88	1.34	0.58	0.67	0.16	17.3	3.8	37.2	7.1
SY069	10	1800	2250	2	24.7/12.3		29.18			94.5	85	0	1.1	0.397	0.1	10.8	2.7	20.4	5.1

* Data not applicable for a PMAC motor

NEMA Premium[®] Efficiency XRI[®] Series Inverter Duty Motors



Features

- Meets or exceeds NEMA Premium efficiencies
- Inverter duty
- Suitable for use with ALS (across-the-line starting) or IGBT (AC drive)
- 10:1 variable torque and constant torque on VFD with 1.0 service factor
- 1.15 service factor on sinewave; 1.0 service factor on IGBT power
- Class F insulation
- Continuous duty at 40° C ambient
- Rolled steel construction with C-face rigid base mounting
- F3 conduit box location
- Utilizes ball bearings
- Electrically reversible
- UL Recognized, CSA Certified, and CE Mark
- Three-year warranty (through Marathon Electric)

Applications

- Typical uses include gear reducers, pumps, machine tools, and other direct-coupled equipment installed in damp, dusty, or dirty environments where long life and ultra-high efficiency is desired.

Motor Shipping Schedule *

Same or one day * Up to 7 days Up to 10 days

Color indicates shipping lead time in business days. Check stock status online.

* Certain heavy and oversized items can be shipped only via LTL. Check our website for current shipping method constraints by part number.

208-230/460V Motor Specifications

Part Number*	Price	HP	Base RPM	Volts	Enclosure	NEMA Frame	Model No.	F.L. Amps	Weight (lb)*	Drawing Links			
E2000	\$803.00	1	3600	208-230 / 460	TEFC	56C	056T34F5940	3.0-2.8 / 1.4	28	PDF			
E2001A	\$655.00		1800			143TC	143TTFR16053	3.3-3.3 / 1.65	48	PDF			
E2002	\$735.00		1200			145TC	145TTFR6078	3.8-3.8 / 1.9	42	PDF			
E2003	Retired	1-1/2	3600			143TC	143TTFR5582	4.4-4.0 / 2.0	39	PDF			
E2004A	\$689.00		1800			145TC	145TTFR16331	4.7-4.6 / 2.3	50	PDF			
E2007A	\$739.00		2			1800	145TC	145TTFR16329	6.2-6.0 / 3.0	65	PDF		
E2009 †	Retired	3	3600			208-230 / 460	TEFC	182TC	182TTFW6001	8.4-7.8 / 3.9	63	PDF	
E2010 †	Retired		1800						182TTFW6026	8.4-7.8 / 3.9	87	PDF	
E2011A	Retired		1200					213TC	213TTFWD6076	9.2-8.8 / 4.4	117	PDF	
E2013 †	Retired	5	1800					208-230 / 460	TEFC	184TC	184TTFW6026	12.6 / 6.3	87
E2014A	Retired		1200	215TC	215TTFWD6076					14.8-17 / 7	150	PDF	
E2016B	Retired		7-1/2	1800	213TC					213TTFWD16039	20.8-19.6 / 9.8	124	PDF
E2018A	Retired	10	3600	230 / 460	215TC					215TTFWD6001	23.6 / 11.8	133	PDF

* Refer to the Motor Shipping Schedule table for shipping information.

Certain heavy and oversized items can be shipped only via LTL. Check our web site for current shipping method constraints by part number.

† These specifications are for the Marathon motor currently being sold. Marathon manufactured a previous version of this Part Number (that had a different model #), and that version had some different specifications. For detailed information on the previous motor, please refer to the "Previous Marathon Model Numbers" table on the next page, or click on the previous motor's specification at www.AutomationDirect.com/Retired-Products.

Notes: Please review the AutomationDirect Terms & Conditions for warranty and service on this product.

Warranty service can be arranged through numerous Marathon Electric service centers.

See list of service centers on our Web site at www.automationdirect.com.

NEMA Premium[®] Efficiency XRI[®] Series Inverter Duty Motors

Performance Data

Performance Data (460 Volt)																	
Part Number	HP	NEMA Design	F.L. RPM	Min RPM	Current (Amps)			Torque (lb-ft)			Max CHP RPM*	Max Safe RPM	F.L. Effic. (%)	F.L. Power Factor	Rotor Inertia (lb-ft ²)		
					No Load	Full Load	Locked Rotor	Full Load	Locked Rotor	Break-down							
E2000	1	B	3490	349	0.7	1.4	10	1.5	3.6	5.1	5235	7200	80	84	0.04		
E2001A		A	1765	177	1.2	1.7	17	3.0	13.7	16.8	1765	4000	85.5	68	0.12		
E2002				1170	117	1.3	1.9	10	4.5	13.5	15.8	1755	5400	82.5	60	0.14	
E2003	1-1/2	B	3490	349	1.0	2.0	21	2.3	8.5	11.2	5235	7200	84.0	82	0.06		
E2004A					1755	176	1.5	2.3	24	4.5	21.2	26	1755	4000	86.5	71	0.14
E2007A	2		1760	176	1.9	3.0	30.5	6.0	24.5	33.2	1760	4000	86.5	71	0.14		
E2009 †	3	B	3510	351	1.8	3.9	33	4.5	11.0	18.2	5265	7200	86.5	83	0.23		
E2010 †					1760	176	1.9	3.9	33.5	8.9	22.5	36	2640	4000	89.5	80.5	0.38
E2011A					1170	117	2.5	4.4	32	13.5	34	47.5	1755	4200	89.5	70	0.80
E2013 †	5	B	1760	176	2.4	6.3	49	15.0	30.1	50.2	2640	4000	89.5	83	0.49		
E2014A					1170	117	3.7	7.0	46	22.5	45.6	68.2	1755	4000	89.5	75	1.00
E2016B	7-1/2		1765	177	4.9	9.8	67.5	22.3	52.9	75	1765	4000	91.7	78.3	0.85		
E2018A	10		3535	354	3.5	11.8	80	14.9	30	46	5302.5	5400	91.7	87	0.65		

* Maximum Constant HP RPM is for direct coupled loads.

† These specifications are for the Marathon motor currently being sold. Marathon manufactured a previous version of this Part Number (that had a different model #), and that version had some different specifications. For detailed information on the previous motor, please refer to the "Previous Marathon Model Numbers" table below, or click on the previous motor's specification at www.AutomationDirect.com/Retired-Products.

marathon[®]
Motors

**C-Face Footed (Rigid
and Removable Base)**



XRI[®] 4N1 General Purpose, 3-Phase, Totally Enclosed Motors

Features

- Meets or exceeds all NEMA Premium efficiencies, except as noted
- Ball bearings, mechanically locked on shaft end
- 1.15 Service factor, except as noted
- Class F insulation, except as noted
- Rated 60/50 hertz, 190/380 or 380 volt, at next lower horsepower, as noted
- Rolled steel 56-145T frame motors except brake kits. See Accessories section.
- UL recognized, CSA certified and CE mark
- 4N1 Motor features include:
 - CR200 corona-resistant magnet wire
 - Bolt-on, removable rigid base
 - Suitable for horizontal and vertical mounting
 - Will accept drip cover kits (available from Marathon)

Applications

- Typical uses include machine tools, conveyors, packaging machines, batching machines, food and beverage equipment, pumps and fans.

Motor Shipping Schedule *

Same or one day * Up to 7 days Up to 10 days

Color indicates shipping lead time in business days. Check stock status online.

* Certain heavy and oversized items can be shipped only via LTL.

Check our website for current shipping method constraints by part number.

Motor Specifications – XRI 4N1 General Purpose, 3-Phase, Totally Enclosed Motors

Part Number*	Price	HP	Base RPM	Volts	Encl.	NEMA Design	NEMA Frame	Model No.	F.L. Amps	Weight (lb)*	Footnotes	Drawing Links
D390	\$257.00	1/3	3600	208-230 / 460	TENV	B	56C	056T34T5303	1.6-1.8 / 0.9	20	4N1 Motor NOT NEMA Premium	PDF
G580	Retired	1/3	1800	208-230 / 460				056T17T5305	1.8-1.6 / 0.8	20		PDF
D391	Retired	1/2	3600	208-230 / 460	TEFC			056T34F5301	2-2.2/1.1	22		PDF
G581	\$385.00	1/2	1800	208-230 / 460				056T17F5321	2.3-2.4/1.2	24		PDF
K705	\$386.00	1/2	1800	575				056T17F5336	0.95	23		PDF
D392	\$314.00	3/4	3600	208-230 / 460				056T34F5302	3-3.2 / 1.6	23		PDF
G582	\$421.00	3/4	1800	208-230 / 460				056T17F5322	2.9-3 / 1.5	40		PDF
K707	\$431.00	3/4	1800	575				056T17F5337	1.2	24		PDF

* Refer to the Motor Shipping Schedule table for shipping information.

Certain heavy and oversized items can be shipped only via LTL. Check our website for current shipping method constraints by part number.

Footnotes: The following part numbers are 4N1 motors; they are NOT NEMA Premium: [D390](#), [G580](#), [D391](#), [G581](#), [K705](#), [D392](#), [G582](#), and [K707](#).

Notes: Please review the AutomationDirect Terms & Conditions for warranty and service on this product. Warranty service can be arranged through numerous Marathon Electric service centers. See list of service centers on our website at www.automationdirect.com.

XRI[®] 4N1 General Purpose, 3-Phase, Totally Enclosed Motors

C-Face Footed (Rigid and Removable Base)

Motor Specifications – XRI 4N1 General Purpose, 3-Phase, Totally Enclosed Motors												
Part Number*	Price	HP	Base RPM	Volts	Encl.	NEMA Design	NEMA Frame	Model No.	F.L. Amps	Weight (lb)*	Footnotes	Drawing Links
D393A	\$483.00	1	3600	230 / 460**	TEFC	B	56C	056T34F99008	3.0-1.5	26	**Motors rated 230/460 are suitable for 208V @ 60Hz	PDF
K708A	\$468.00	1	3600	575		B	56C	056T34F99010	1.2	24		PDF
G583A	\$483.00	1	1800	230 / 460**		56HC	056T17F15639	3.3 / 1.65	42	PDF		
K709A	\$533.00	1	1800	575		56HC	056T17F15642	1.3	42	PDF		
D394A	\$586.00	1-1/2	3600	230 / 460		56C	056T34F99017	3.15	48	PDF		
K721A	\$560.00	1-1/2	3600	575		56C	056T34F99020	1.6	37	PDF		
G584A	\$588.00	1-1/2	1800	230 / 460**		56HC	056T17F15641	4.6 / 2.3	45	PDF		
D395A	\$676.00	2	3600	230 / 460**		56HC	056T34F99012	5 / 2.5	45	PDF		
G585A	\$628.00	2	1800	230 / 460**		56HC	056T17F15640	6.0/3.0	48	PDF		
K724A	\$591.00	2	1800	575		56HC	056T17F15644	2.4	48	PDF		
D396A	Retired	3	3600	230 / 460**		56HC	056T34F99014	7.6 / 3.8	52	PDF		
K725A	\$683.00	3	3600	575		A	56HC	056T34F15593	3.05	46		4N1 Motor PDF
C383B	Retired	3	1800	575		B	182TC	182TTFW16027	3.2	75		PDF
C387B	Retired	5	1800	575			184TC	184TTFW16029	5.1	87		PDF
C389B	Retired	7-1/2	3600	208-230 / 460			213TCV	213TTFW16008	19.7-18.6/9.3	100		PDF
C390B	Retired	7-1/2	1800	208-230 / 460			213TC	213TTFW16035	20.8-19.6/9.8	146		PDF
C391B	Retired	7-1/2	1800	575			213TCV	213TTFW16036	7.9	157		PDF
C392B	Retired	10	3600	208-230 / 460			215TC	215TTFW16005	25.9-23.6 / 11.8	139		PDF

* Refer to the Motor Shipping Schedule table for shipping information.

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Footnotes: The following part numbers are 4N1 motors; they are NOT NEMA Premium: [D390](#), [G580](#), [D391](#), [G581](#), [K705](#), [D392](#), [G582](#), and [K707](#).

Notes: Please review the AutomationDirect Terms & Conditions for warranty and service on this product. Warranty service can be arranged through numerous Marathon Electric service centers. See list of service centers on our website at www.automationdirect.com.

XRI[®] 4N1 General Purpose, 3-Phase, Totally Enclosed Motors

C-Face Footed (Rigid and Removable Base)

Performance Data - XRI 4N1 General Purpose, 3-Phase, Totally Enclosed Motors											
Part Number	HP	F.L. RPM	Current (Amps)			Torque (lb-ft)			F.L. Effic. %	F.L. Power Factor	Rotor Inertia (lb-ft ²)
			No Load	Full Load	Locked Rotor	Full Load	Locked Rotor	Break-down			
D390	1/3	3450	0.7	0.9	8.0	0.5	2.5	3.8	65	56	0.022
G580	1/3	1725	0.5	0.8	5.0	1.0	4.3	5.3	68	61.9	0.04
D391	1/2	3450	0.7	1.1	8.0	0.76	3.0	3.8	66	69.7	0.02
G581	1/2	1725	0.9	1.2	7.0	1.5	6.2	7.2	72	53	0.05
K705	1/2	1725	0.7	0.95	5.6	1.5	6.2	7.2	72.1	53.3	0.05
D392	3/4	3450	1	1.6	11.5	1.14	4.0	5.6	74	69.1	0.023
G582	3/4	1725	1	1.5	9.8	2.28	8.2	10	75.5	66.3	0.07
K707	3/4	1725	0.8	1.2	7.8	2.28	8.2	10	75.5	66.3	0.07
D393A	1	3485	0.75	1.5	1.50	1.50	3.2	4.8	78.5	79.1	0.02
K708A	1	3450	0.6	1.2	8.0	1.50	3.2	4.8	78.5	79.1	0.023
G583A	1	1725	1.15	1.65	17	3.0	13.7	16.8	85.5	68	0.12
K709A	1	1725	0.9	1.3	13.6	3.0	13.7	16.8	85.5	68	0.12
D394A	1-1/2	3515	0.9	1.5	19.4	2.20	7.3	9.6	84	83.5	0.05
K721A	1-1/2	3450	0.7	1.6	15.5	2.2	7.3	9.6	84	83.5	0.045
G584A	1-1/2	1725	1.5	2.3	24	4.5	21.2	26	86.5	71	0.14
D395A	2	3500	1.0	2.5	21.7	3.0	9.5	12.2	85.5	86	0.07
G585A	2	1725	1.9	3.0	30.5	6.0	24.5	33.2	86.5	71	0.14
K724A	2	1725	1.5	2.4	24.4	6.0	24.5	33.2	86.5	71	0.14
D396A	3	3450	1.7	3.8	36.9	4.5	17.29	22.7	87.5	84	0.045
K725A	3	3450	1.4	3.05	29.5	4.5	17.29	22.7	87.5	84	0.045
C383B	3	1760	1.5	3.2	27	8.9	22	35.2	89.5	80.5	0.38
C387B	5	1760	1.92	5.1	39.2	14.9	30.1	50.2	89.5	83.1	0.485
C389B	7-1/2	3525	4.1	9.3	63	11.2	19.3	33	89.5	84.6	0.55
C390B	7-1/2	1765	4.9	9.8	67.5	22.3	52.9	75	91.7	78.3	0.85
C391B	7-1/2	1765	3.9	7.9	54.0	22.3	52.9	75	91.7	78.3	0.85
C392B	10	3525	4.4	11.8	79.5	14.9	27.7	47.1	90.2	87.9	0.55



ACCU-Torq® Vector Duty 3-Phase AC Motors

56C – 215TC Frame – 1/4HP to 10HP

U.S. MOTORS® ACCU-Torq® series AC motors offer a solution to applications requiring accurate positioning or precise speed control without the rapid acceleration dynamics of a servomotor. ACCU-Torq motors are designed to be used with inverters and vector drives in applications requiring up to a 5000:1 constant torque speed range.

Standard Features

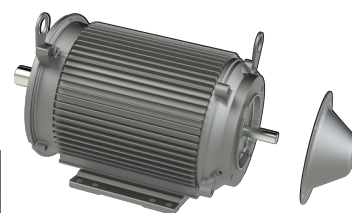
- 230/460 VAC
- Rated output: 1/4 - 10 HP
- 1800 RPM
- Class F insulation (155° C), inverter duty NEMA MG1 Part 31
- Constant torque operation; zero to base speed on vector drives
- Constant horsepower operation to twice base speed
- Optimized for operation with IGBT and intelligent power module drives (NEMA®+ Design A)
- F-1 Standard, field convertible to F-2 for 180 frame and above
- Normally closed thermostats standard
- Horizontal or Vertical mounting
- Continuous duty at 40°C ambient
- Compatible with encoder installation

Applications

- Packaging machinery
- Extruders
- Material handling
- Indexing and positioning
- Positive displacement pumps
- DC Motor Replacements



UN5T2BC



Motor Specifications – 3-phase											
Part Number	Price	HP*	Base RPM	Volts	Encl.	NEMA Frame	Service Factor	NEMA Design	Weight (lb)	Data Pack Links	Drawing Links
Rigid Base With C-face - 1800 RPM											
UN14T2BC	\$370.00	1/4	1800	230/460 VAC	TENV	56C	1.0	A	35.1	PDF	PDF
UN12T2BC	\$448.00	1/2							42.3	PDF	PDF
UN1T2BC	\$530.00	1							43.1	PDF	PDF
UN1T2BFC	\$530.00								43.3	PDF	PDF
UN32T2BC	\$651.00	1 1/2							49.7	PDF	PDF
UN2T2BC	\$697.00	2							57.3	PDF	PDF
UN3T2BC	\$781.00	3							65.2	PDF	PDF
UN5T2BC	\$908.00	5							85.3	PDF	PDF
UN7T2BC	\$1,241.00	7 1/2							135	PDF	PDF
UN10T2BC	\$1,499.00	10							178	PDF	PDF

*See Motor Data Pack for additional specifications

Performance Data – 3-phase																	
Part Number	HP*	Full Load RPM*	Volts*	Current			Torque			Resistance Main		Torque Speed Rating		Full Load Effic. %	Full Load Power Factor	Moment of Inertia (lb-ft ²)	
				No Load Current	Full Load Amps	Locked Rotor Amps	Full Load (lb-ft)	Locked Rotor	Breakdown	% of Full Load Torque	230V	460V	Constant				Variable
Rigid Base With C-face - 1800 RPM																	
UN14T2BC	1/4	1765	230/460 VAC	0.8/0.4	1/0.5	8.2/4.1	0.70	419	586	12.42	49.69	5000:1	5000:1	77.0	61.1	0.026	
UN12T2BC	1/2	1750		1/0.5	1.5/0.8	12.1/6	1.50	335	457	6.47	25.87			74.2	0.039		
UN1T2BC	1	1755		2.2/1.1	3.2/1.6	31/15.5	3.00	473	595	2.72	10.88			84.0	0.04		
UN1T2BFC					3.2/1.6	31/15.6		476	600	2.66	10.64						
UN32T2BC	1 1/2	1760		3.2/1.6	4.7/2.3	52/25.9	4.50	518	665	1.55	6.18			86.5	69.7	0.052	
UN2T2BC	2	1750		3.3/1.7	5.6/2.8	56/28	6.00	425	543	1.37	5.46			76.8	0.065		
UN3T2BC	3	1770		7.9/4	10.1/5	92/46	8.90	400	573	0.77	3.08			87.5	63.6	0.117	
UN5T2BC	5			8.8/4.4	13.9/7	142/71	14.80	367	531	0.46	1.84			90.2	74.5	0.176	
UN7T2BC	7 1/2	1775		9/4.5	18.8/9.4	178/89	22.20	349	445	0.21	0.84			92.4	80.7	0.359	
UN10T2BC	10			12.9/6.4	25.3/12.7	275/138	29.60	416	519	0.13	0.53			93.0	79.6	0.494	

*See Motor Data Pack for additional specifications

TOSHIBA

Toshiba SD (Severe Duty) 3-Phase Motors

56-404 Frame Motors – 1/2HP to 100HP

Standard Features

- 230/460 VAC
- Rated output: 1/2 - 100 HP
- 1800, 3600, 1200 RPM
- Class F insulation (155° C), inverter duty, exceeds NEMA MG1 Part 31
- IP55
- Constant torque speed ratings 20:1 on 4 and 6 pole, 10:1 on 2 pole
- Frame sizes: NEMA 56 to 405
- Rigid base or C-face footed mount
- Enclosure: TEFC (1/2HP TENV only)
- Stamped steel fan cover
- Certified Class I, Div 2, Groups A,B,C,D
- Multiple drain provisions for horizontal and vertical mounting
- 100% no-load commercial test per IEEE 112 on all motors
- Non-sparking, non-corrosive fan
- Lead cable rating 125°C
- Lead terminal lugs: 284 frame & larger

Advanced Features

- Oversized 300 series bearings provides extended motor life
- Grade 25 cast iron frame, bearing brackets, and conduit box
- Heavy duty durable construction includes increased ribbing on the end bells, maximum surface area at connection points, and deep bearing pockets
- Manufactured to run at lower vibration levels, preserving the mechanical integrity of the motor and bearings
- High torque output meets or exceeds NEMA B
- Class H (180C) Insulation on many components

Applications

- Severe duty or general purpose
- Higher ambient temperature or higher elevation locations
- Pumps
- Fans
- Compressors
- Conveyors
- Mixers
- Material handling



0106SDSR41A-P



0104SDSR42A-P

Motor Specifications – 3-phase															
Part Number	Price	HP*	Base RPM	Volts	Encl.	NEMA Frame	Service Factor	NEMA Design	Weight (lb)	Drawing Links					
Rigid Base - 1800 RPM															
1-24FNSR31H-P	\$414.00	1/2	1800	230/460 VAC	TENV	56	1.25	B	57	PDF					
3-44SDSR31H-P	\$437.00	3/4			57				PDF						
0014SDSR41A-P	\$376.00	1			143T				57	PDF					
Y154SDSR41A-P	\$413.00	1 1/2			145T				57	PDF					
0024SDSR41A-P	\$449.00	2			182T				57	PDF					
0034SDSR41A-P	\$516.00	3			184T				95	PDF					
0054SDSR41A-P	\$589.00	5			213T				101	PDF					
Y754SDSR41A-P	\$842.00	7 1/2			215T				187	PDF					
0104SDSR41A-P	\$1,025.00	10			254T				198	PDF					
0154SDSR41A-P	\$1,383.00	15			256T				317	PDF					
0204SDSR41A-P	\$1,708.00	20			284T				355	PDF					
0254SDSR41A-P	\$2,072.00	25			286T				481	PDF					
0304SDSR41A-P	\$2,491.00	30			324T				496	PDF					
0404SDSR41A-P	\$3,221.00	40			326T				642	PDF					
0504SDSR41A-P	\$3,928.00	50			364T				701	PDF					
0604SDSR41A-P	\$5,536.00	60			365T				873	PDF					
0754SDSR41A-P	\$7,132.00	75			405T				932	PDF					
1004SDSR41A-PR	\$10,130.00	100							1418	PDF					
Rigid Base With C-face - 1800 RPM															
1-24FNSR32H-P	\$446.00	1/2			1800				230/460 VAC	TENV	56C	1.25	B	57	PDF
3-44SDSR32H-P	\$465.00	3/4	57	PDF											
0014SDSR42A-P	\$485.00	1	143TC	60		PDF									
0014SDSR42H-P	\$555.00		56C	75		PDF									
Y154SDSR42A-P	\$524.00	1 1/2	145TC	64		PDF									
0024SDSR42A-P	\$562.00	2	182TC	60		PDF									
0034SDSR42A-P	\$649.00	3	184TC	104		PDF									
0054SDSR42A-P	\$726.00	5	213TC	112		PDF									
Y754SDSR42A-P	\$984.00	7 1/2	215TC	192		PDF									
0104SDSR42A-P	\$1,167.00	10	254TC	198		PDF									
0154SDSR42A-P	\$1,596.00	15	256TC	324		PDF									
0204SDSR42A-P	\$1,922.00	20	284TC	353		PDF									
0254SDSR42A-P	\$2,427.00	25	286TC	496		PDF									
0304SDSR42A-P	\$2,847.00	30	324TC	509		PDF									
0404SDSR42A-P	\$3,620.00	40	326TC	670		PDF									
0504SDSR42A-P	\$4,327.00	50		711		PDF									

*See Motor Data Pack for 50Hz specifications



Toshiba SD (Severe Duty) 3-Phase Motors

Motor Specifications – 3-phase														
Part Number	Price	HP*	Base RPM	Volts	Encl.	NEMA Frame	Service Factor	NEMA Design	Weight (lb)	Drawing Links				
Rigid Base - 3600 RPM														
3-42SDSR31H-P	\$399.00	3/4	3600	230/460 VAC	TEFC	56	1.25	B	53	PDF				
0012SDSR41H-P	\$475.00	1							53	PDF				
Y152SDSR41A-P	\$409.00	1 1/2				143T	57		PDF					
0022SDSR41A-P	\$496.00	2				145T	57		PDF					
0032SDSR41A-P	\$525.00	3				182T	86		PDF					
0052SDSR41A-P	\$650.00	5				184T	99		PDF					
Y752SDSR41A-P	\$842.00	7 1/2				213T	168		PDF					
0102SDSR41A-P	\$1,010.00	10				215T	183		PDF					
0152SDSR41A-P	\$1,390.00	15				254T	295		PDF					
0202SDSR41A-P	\$1,800.00	20				256T	313		PDF					
0302SDSR41B-P	\$2,539.00	30				286TS	474		PDF					
0402SDSR41B-P	\$3,197.00	40				324TS	622		PDF					
0502SDSR41B-P	\$4,432.00	50				326TS	655		PDF					
Rigid Base With C-face - 3600 RPM														
3-42SDSR32H-P	\$436.00	3/4	3600	230/460 VAC	TEFC	56C	1.25	B	53	PDF				
0012SDSR42H-P	\$522.00	1							57	PDF				
Y152SDSR42A-P	\$520.00	1 1/2				143TC	62		PDF					
0022SDSR42A-P	\$611.00	2				145TC	62		PDF					
0032SDSR42A-P	\$659.00	3				182TC	93		PDF					
0052SDSR42A-P	\$791.00	5				184TC	106		PDF					
Y752SDSR42A-P	\$984.00	7 1/2				213TC	174		PDF					
0102SDSR42A-P	\$1,152.00	10				215TC	192		PDF					
0152SDSR42A-P	\$1,603.00	15				254TC	304		PDF					
Rigid Base - 1200 RPM														
1-26SDSR31H-P	\$442.00	1/2	1200	230/460 VAC	TEFC	56	1.25	B	57	PDF				
3-46SDSR31H-P	\$443.00	3/4							57	PDF				
0016SDSR41A-P	\$467.00	1				145T	60		PDF					
Y156SDSR41A-P	\$499.00	1 1/2				182T	99		PDF					
0036SDSR41A-P	\$735.00	3				213T	163		PDF					
0056SDSR41A-P	\$1,080.00	5				215T	176		PDF					
Y756SDSR41A-P	\$1,433.00	7 1/2				254T	278		PDF					
0106SDSR41A-P	\$1,751.00	10				256T	291		PDF					
0156SDSR41A-P	\$2,456.00	15				284T	441		PDF					
0206SDSR41A-P	\$2,877.00	20				286T	457		PDF					
0256SDSR41A-P	\$3,491.00	25				324T	590		PDF					
0306SDSR41A-P	\$4,262.00	30				326T	613		PDF					
0406SDSR41A-P	\$5,576.00	40				364T	766		PDF					
0506SDSR41A-P	\$6,510.00	50				365T	814		PDF					
Rigid Base With C-face - 1200 RPM														
1-26SDSR32H-P	\$484.00	1/2				1200	230/460 VAC		TEFC	56C	1.25	B	57	PDF
Y156SDSR42A-P	\$632.00	1 1/2	182TC	109	PDF									
0036SDSR42A-P	\$915.00	3	213TC	165	PDF									
0056SDSR42A-P	\$1,279.00	5	215TC	179	PDF									
Y756SDSR42A-P	\$1,647.00	7 1/2	254TC	282	PDF									

*See Motor Data Pack for 50Hz specifications



Toshiba SD (Severe Duty) 3-Phase Motors

Performance Data – 3-phase																			
Part Number	HP*	Full Load RPM*	Volts*	Current			Torque				Torque Speed Rating		Full Load Effic. %	Full Load Power Factor	Moment of Inertia (lb-ft ²)				
				No Load Current	Full Load Amps	Locked Rotor Amps	Full Load (lb-ft)	Locked Rotor	Breakdown	Pull Up	Constant	Variable							
																% of Full Load Torque			
Rigid Base - 1800 RPM																			
1-24FNRSR31H-P	1/2	1755	230/460 VAC	0.4	2.8/1.4	5.6	1.50	245	355	195	20:1	60:1	84.0	74.90	0.11				
3-44SDSR31H-P	3/4	1765		0.8	11.6/5.8	10.3	2.23	320	455	245				67.30					
0014SDSR41A-P	1	1760		1.1	2.8/1.4	13.8	2.98	340	490	295			85.5	67.50					
Y154SDSR41A-P	1 1/2	1755		1.3	210/105	17.1	4.49	260	365	325			86.5	73.10	0.12				
0024SDSR41A-P	2	1750		1.6	5.2/2.6	24.0	6.00	255	390	225				84.80	0.13				
0034SDSR41A-P	3	1760		1.8	7.4/3.7	32.0	8.95	270		225			89.5	79.60	0.37				
0054SDSR41A-P	5	1750		2.7	11.6/5.8	46.0	15.00	255	370	240			91.7	81.20	0.5				
Y754SDSR41A-P	7 1/2	1760		4.4	210/105	63.0	22.40	270	340	215				79.90	1.15				
0104SDSR41A-P	10			5.7	24/11.8	81.0	29.80	260	330	225			80.20	1.34					
0154SDSR41A-P	15	1770		7.5	36/18	113.0	44.50	240	265	185			92.4	81.00	2.33				
0204SDSR41A-P	20			9.8	48/24	145.0	59.30	260	280	215			93.0	81.00	3.18				
0254SDSR41A-P	25			11	64/32	182.0	74.20	190	295	165			93.6	83.50	5.23				
0304SDSR41A-P	30			12.7	70/35	217.0	89.00	185	290	165				83.60	5.7				
0404SDSR41A-P	40	1775		15.6	94/47	289.0	118.00	180	275	155			94.1	85.40	9.8				
0504SDSR41A-P	50			18.7	116/58	363.0	148.00	175	265	145			94.5	85.70	11.6				
0604SDSR41A-P	60			20	138/69	435.0	178.00	160	270	135			95.0	87.30	16.8				
0754SDSR41A-P	75			24	170/85	543.0	221.00			135			95.4	87.40	20.46				
1004SDSR41A-PR	100	1775		38.8	210/105	725.0	296.00	215	310	175			84.60	25.95					
Rigid Base With C-face - 1800 RPM																			
1-24FNRSR32H-P	1/2	1755		230/460 VAC	0.4	11.6/5.8	5.6	1.50	245	355			195	20:1	60:1	84.0	74.90	0.11	
3-44SDSR32H-P	3/4	1765	0.8		210/105	9.3	1.79	320	455	245	62.10								
0014SDSR42A-P	1	1760	1.1		3.2/1.6	13.8	2.98	340	490	295	85.5	67.50							
0014SDSR42H-P		1765			2.8/1.4	13.6	2.98	320	480	260		66.40							
Y154SDSR42A-P	1 1/2	1755	1.3		210/105	17.1	4.49	260	365	325	86.5	73.10	0.12						
0024SDSR42A-P	2	1750	1.6		5.2/2.6	24.0	6.00	255	390	225		84.80	0.13						
0034SDSR42A-P	3	1760	1.8		7.4/3.7	32.0	8.95	270		225	89.5	79.60	0.37						
0054SDSR42A-P	5	1750	2.7		11.6/5.8	46.0	15.00	255	370	240	91.7	81.20	0.5						
Y754SDSR42A-P	7 1/2	1760	4.4		210/105	63.0	22.40	270	340	215		79.90	1.15						
0104SDSR42A-P	10		5.7		24/11.8	81.0	29.80	260	330	225	80.20	1.34							
0154SDSR42A-P	15	1770	7.5		36/18	113.0	44.50	240	265	185	92.4	81.00	2.33						
0204SDSR42A-P	20		9.8		50/25	145.0	59.30	260	280	215	93.0	81.00	3.18						
0254SDSR42A-P	25		11		64/32	182.0	74.20	190	295	165	93.6	83.50	5.23						
0304SDSR42A-P	30		12.7		72/36	217.0	89.00	185	290	165		83.60	5.7						
0404SDSR42A-P	40	1775	15.6		96/48	289.0	118.00	180	275	155	94.1	85.40	9.8						
0504SDSR42A-P	50		18.7		120/60	362.0	148.00	175	265	145	94.5	85.70	11.6						

*See Motor Data Pack for 50Hz specifications

TOSHIBA Toshiba SD (Severe Duty) 3-Phase Motors

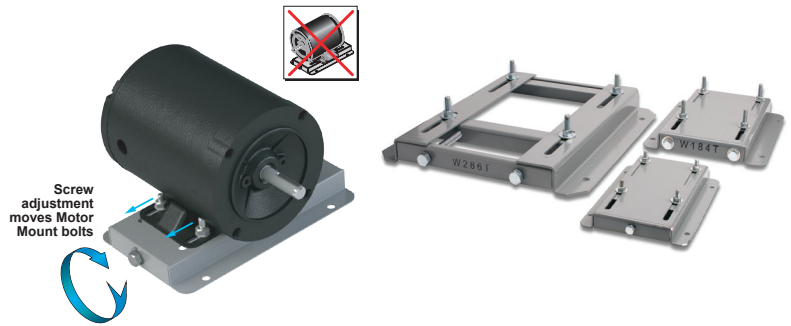
Performance Data – 3-phase																	
Part Number	HP*	Full Load RPM*	Volts*	Current			Torque				Torque Speed Rating		Full Load Effic. %	Full Load Power Factor	Moment of Inertia (lb-ft ²)		
				No Load Current	Full Load Amps	Locked Rotor Amps	Full Load (lb-ft)	Locked Rotor	Breakdown	Pull Up	Constant	Variable					
																% of Full Load Torque	
Rigid Base - 3600 RPM																	
3-42SDSR31H-P	3/4	3510	230/460 VAC	0.5	210/105	7.4	1.12	220	275	170	10:1	60:1	84.0	78.70	0.04		
0012SDSR41H-P	1	3480		0.7	2.8/1.4	9.0	1.51	225	335	170			77.0	79.00			
Y152SDSR41A-P	1 1/2	3490		1	210/105	18.0	2.26	265	360	225			84.0	75.80		0.05	
0022SDSR41A-P	2			1.2	5.2/2.6	24.0	3.01						275	245	85.5	84.40	0.06
0032SDSR41A-P	3	3500		1.2	7.4/3.7	29.0	4.50	195	335	175			86.5	88.80	0.13		
0052SDSR41A-P	5				1.4	11.6/5.8	46.0	7.50	215	340			185	88.5	91.80	0.2	
Y752SDSR41A-P	7 1/2	3510		2.4	210/105	60.0	11.30	230	320	215			89.5	88.50	0.46		
0102SDSR41A-P	10				3.6	24/11.8	80.0	15.00	265	355			235	90.2	88.20	0.62	
0152SDSR41A-P	15	3530		5.5	36/18	116.0	22.30	230	280	195			91.0	86.60	1.19		
0202SDSR41A-P	20	3520		6.1	48/24	143.0	29.80	215	255	195				87.70	1.38		
0302SDSR41B-P	30	3540		9.2	70/35	217.0	44.50		265	265			195	91.7	88.90	3.58	
0402SDSR41B-P	40				12	94/47	290.0	59.30		265			275	225	92.4	87.70	5.74
0502SDSR41B-P	50				13.7	116/58	362.0	74.20		250			260	215	93.0	88.20	6.39
Rigid Base With C-face - 3600 RPM																	
3-42SDSR32H-P	3/4	3510	230/460 VAC	0.5	210/105	7.4	1.12	220	275	170	10:1	60:1	84.0	78.70	0.04		
0012SDSR42H-P	1	3480		0.7	2.8/1.4	9.0	1.51	225	335	170			77.0	79.00			
Y152SDSR42A-P	1 1/2	3490		1	210/105	18.0	2.26	265	360	225			84.0	83.20		0.05	
0022SDSR42A-P	2			1.2	5.2/2.6	24.0	3.01						275	245	85.5	84.40	0.06
0032SDSR42A-P	3	3500		1.2	7.4/3.7	29.0	4.50	195	335	175			86.5	88.80	0.13		
0052SDSR42A-P	5				1.4	11.6/5.8	46.0	7.50	215	340			185	88.5	91.80	0.2	
Y752SDSR42A-P	7 1/2	3510		2.4	210/105	60.0	11.30	230	320	215			89.5	88.50	0.46		
0102SDSR42A-P	10				3.6	24/11.8	80.0	15.00	265	355			235	90.2	88.20	0.62	
0152SDSR42A-P	15	3530		5.5	36/18	116.0	22.30	230	280	195			91.0	86.60	1.19		
Rigid Base - 1200 RPM																	
1-26SDSR31H-P	1/2	1170	230/460 VAC	0.6	1.4/0.7	5.7	2.24	235	310	180	20:1	60:1	80.0	65.50	0.15		
3-46SDSR31H-P	3/4	1165		0.8	11.6/5.8	8.0	3.38	215	285	165			82.5	66.50			
0016SDSR41A-P	1	1170		1.2	2.8/1.4	12.5	4.49	240	350	175				65.60	0.18		
Y156SDSR41A-P	1 1/2			1.5	210/105	20.0	6.73	245	420	185			87.5	65.40	0.43		
0036SDSR41A-P	3			2.4	7.4/3.7	32.0	13.50	225	370	205			89.5	74.10	1.03		
0056SDSR41A-P	5	1160		3.1	11.6/5.8	45.5	22.60	185	330	175				78.20	1.32		
Y756SDSR41A-P	7 1/2	1170		4.6	210/105	63.8	33.70	255	310	240			91.0	78.40	2.16		
0106SDSR41A-P	10				5.5	24/11.8	79.1	44.90	280	380				270	79.90	2.65	
0156SDSR41A-P	15	3510		9.2	36/18	116.0	67.00	240	260	215			91.7	77.80	4.68		
0206SDSR41A-P	20	1170		11.2	50/25	145.0	89.80	255	275	225				79.90	6.1		
0256SDSR41A-P	25	1180		12.3	64/32	182.5	111.00	235		215			93.0	81.40	11.3		
0306SDSR41A-P	30			14.7	72/36	217.0	134.00	220	265	155				81.00	12.34		
0406SDSR41A-P	40			15.5	96/48	288.0	178.00	190	260	175			94.1	85.50	17.67		
0506SDSR41A-P	50			18.2	120/60	360.0	223.00	185	250	165				85.20	20.06		
Rigid Base With C-face - 1200 RPM																	
1-26SDSR32H-P	1/2	1170	230/460 VAC	0.6	2.8/1.4	5.7	2.24	235	310	180	20:1	60:1	80.0	65.50	0.15		
Y156SDSR42A-P	1 1/2			1.5	210/105	20.0	6.73	245	420	185			87.5	65.40	0.43		
0036SDSR42A-P	3			2.4	7.4/3.7	32.0	13.50	225	370	205			89.5	74.10	1.03		
0056SDSR42A-P	5			1160	3.1	11.6/5.8	45.5	22.60	185	330				175	78.20	1.32	
Y756SDSR42A-P	7 1/2			1170	4.6	210/105	63.8	33.70	255	310			240	91.0	78.40	2.16	

*See Motor Data Pack for 50Hz specifications

STABLE™ Motor Slide Bases

Mounting Slide Bases for 56 to 449T NEMA Motors Features

- Allows adjustment of motor mounting position
- Slide direction is perpendicular to motor shaft
- Double adjusting screws for frames 182T-449T
- Manufactured to precise dimensional standards
- Dimensionally interchangeable with existing major makes
- Heavy-duty steel construction
- Painted with oven-baked primer for better adhesion of customer's paint
- All "D" bolts (motor mounting bolts) are fixed to the exact motor foot pattern
- All "D" bolts are welded into position to prevent spinning and dropping from slots
- Nuts and washers are provided for securing the motor to the slide base



STABLE Motor Slide Bases for 3-Phase Motors

Part Number (MTA-BASE-xxx)	Price	Fits Frame Type	Product Wt. (lb)	Fits Motor					Drawing Links		
				IronHorse	Leeson®	WEG (Part number ending in...)	Marathon				
					WashGuard®		microMAX, Max+, Black Max, Blue Max, SyMAX	XRI GP & NEMA Premium, Jet Pump		Globetrotter	
W56	\$14.00	56*	2.8	MTPM-P3x-1x18							
				MTPM-P5x-1x18							
				MTPM-P7x-1x18							
				MTPM-0xx-1x18							
				MTPM-1xx-1x18							
				MTR(2)(P)-xxx-xxxxx*							
				MTRJ(P)-xxx-xxxxx							
				MTSN-P33-3BD18							
				MTSN-P33-3BD18R	112427.00						
				MTSN-P33-3BD36	112428.00						
				MTSP-P33-3BD18	112429.00						
				MTSP-P33-3BD18R	112430.00						
				MTSP-P33-3BD36	113019.00						
				MTSP-P33-3BD36R	113023.00						
				MTSN-P50-3BD18	113473.00						E2000
				MTSN-P50-3BD18R	113586.00						D390
				MTSN-P50-3BD36	113590.00				Y500		G580
				MTSP-P50-3BD12	113591.00				Y502		D391
				MTSP-P50-3BD18	113649.00				Y360		G581
				MTSP-P50-3BD18R	116644.00				Y362		K705
				MTSP-P50-3BD36	116645.00				Y364		D392
				MTSP-P50-3BD36R	119468.00				Y280		G582
				MTSN-P75-3BD18	119469.00				Y281		K707
				MTSN-P75-3BD18R	119471.00				Y282		D393A
				MTSN-P75-3BD36	119475.00				Y592(-A772)		K708A
				MTSP-P75-3BD12	119476.00			(...)56-S	Y534(-A772)		G583A
				MTSP-P75-3BD18	119478.00			(...)56C-S	Y535(-A772)		K709A
				MTSP-P75-3BD18R	119480.00				Y555(-A772)		D394A
				MTSP-P75-3BD36	119482.00				Y556(-A772)		K721A
				MTSP-P75-3BD36R	119483.00				SY001		G584A
				MTSN-001-3BD18	191202.00				SY003		D395A
				MTSN-001-3BD18R	191204.00				SY004		G585A
				MTSN-001-3BD36	191205.00				SY005		K724A
				MTSP-001-3BD18	191206.00				SY035		D396A
				MTSP-001-3BD18R	191207.00						K725A
				MTSP-001-3BD36	191208.00						J066A
				MTSP-001-3BD36R	191560.00						
				MTSN-1P5-3BD18	191561.00						
				MTSN-1P5-3BD18R	191562.00						
				MTSN-1P5-3BD36	191563.00						
				MTSP-1P5-3BD18	191564.00						
				MTSP-1P5-3BD18R	191569.00						
				MTSP-1P5-3BD36							
				MTSP-1P5-3BD36R							
				MTSN-002-3BD18							
				MTSN-002-3BD18R							
				MTSN-002-3BD36							
				MTSP-002-3BD18							
				MTSP-002-3BD18R							
				MTSP-002-3BD36							
MTSP-002-3BD36R											

* IronHorse MTR2 56HC motors have double-punched bases to fit on slide base MTA-BASE-W56.

STABLE™ Motor Slide Bases

STABLE Motor Slide Bases for 3-Phase Motors										
Part Number (MTA-BASE-xxx)	Price	Fits Frame Type	Product Wt. (lb)	Fits Motor						Drawing Links
				IronHorse	Leeson®	WEG (Part number ending in...)	Marathon			
					WashGuard®		microMAX, Max+, Black Max, Blue Max, SyMAX	XRI GP & NEMA Premium, Jet Pump	Globetrotter	
W143T	\$26.00	143T/TC	4.6	MTCP2-001-3BD18(C) MTCP2-1P5-3BD36 MTSN-1P5-3BD36-14 MTSP-1P5-3BD36-14 MTSP-1P5-3BD36R-14	191487.00 191565.00		Y536(-A772)	E2001A E2003	-	PDF
W145T	\$26.00	145T/TC	5.1	MTCP2-001-3BD12 MTCP2-1P5-3BD18(C) MTCP2-002-3BD18(C) MTCP2-002-3BD36 MTSP-001-3BD12 MTSN-1P5-3BD18-14 MTSN-1P5-3BD18R-14 MTSP-1P5-3BD18-14 MTSP-1P5-3BD18R-14 MTSN-002-3BD18-14 MTSN-002-3BD18R-14 MTSN-002-3BD36-14 MTSP-002-3BD18-14 MTSP-002-3BD18R-14 MTSP-002-3BD36-14 MTSP-002-3BD36R-14	121866.00 121868.00 121870.00 122182.00 122184.00 122185.00 191490.00 191491.00 191570.00	(...) 145T-S (...) 145TC-S	Y366 Y368 Y284 Y285 Y537(-A772) Y538(-A772) Y551(-A772) Y557(-A772)	E2002 E2004A E2007A	-	PDF
W182T	\$35.50	182T/TC	9.2	MTCP2-1P5-3BD12 MTCP2-003-3BD18(C) MTCP2-003-3BD36 MTSP-1P5-3BD12 MTSN-003-3BD18-18 MTSN-003-3BD36-18 MTSP-003-3BD18-18 MTSP-003-3BD36-18	132196.00 132198.00		Y1999 Y286A Y541A(-A772) Y558A(-A772) SY036 SY066	E2009 E2010	GT0010A GT1010A	PDF
W184T	\$35.50	184T/TC	10	MTCP2-002-3BD12 MTCP2-005-3BD18(C) MTCP2-005-3BD36 MTF-00x-1C18 MTSP-002-3BD12 MTSP-005-3BD18 MTSP-005-3BD36	132197.00 132200.00 132201.00 132440.00		Y1372 Y287A Y540(-A772) Y543A(-A772) Y559A(-A772) E2012 E2013 SY007A SY067	-	GT0013A GT1013A GT1210A GT1212A GT1213A	PDF
W213T	\$52.00	213T/TC	13	MTCP2-003-3BD12 MTCP2-7P5-3BD18(C) MTCP2-7P5-3BD36 MTSP-003-3BD12 MTSP-7P5-3BD18	140819.00 140822.00 141266.00		Y994 Y542(-A772) Y545(-A772) Y560(-A772) E2011 E2016A E2011A E2016B SY068	-	GT0016A GT1016A GT1216A	PDF
W215T	\$52.00	215T/TC	15	MTCP2-005-3BD12 MTCP2-010-3BD18(C) MTCP2-010-3BD36 MTSP-005-3BD12 MTSP-010-3BD18	140820.00 140821.00		Y996 Y544(-A772) Y547(-A772) Y561(-A772) E2018 E2014A E2018A SY069	-	GT0019A GT1019A GT1218A GT1219A	PDF
W254T	\$71.00	254T/TC	18	MTCP2-7P5-3BD12 MTCP2-015-3BD18(C) MTCP2-015-3BD36 MTSP-015-3BD18	-		Y546(-A772) Y549(-A772) Y562(-A772)	-	GT0059 GT1022A GT1222A	PDF

* IronHorse MTR2 56HC motors have double-punched bases to fit on slide base MTA-BASE-W56.

STABLE™ Motor Slide Bases

STABLE Motor Slide Bases for 3-Phase Motors										
Part Number (MTA-BASE- xxx)	Price	Fits Frame Type	Product Wt. (lb)	Fits Motor						Drawing Links
				IronHorse	Leeson®	WEG (Part number ending in...)	Marathon			
					WashGuard®		microMAX, Max+, Black Max, Blue Max, SyMAX	XRI GP & NEMA Premium, Jet Pump	Globetrotter	
W256T	\$71.00	256T/ TC	19	MTCP2-010-3BD12 MTCP2-020-3BD18(C) MTCP2-020-3BD36 MTSP-020-3BD18	-		Y548(-A772) Y552(-A772) Y563(-A772)	-	GT0062 GT1025A GT1225A	PDF
W284T	\$79.00	284T/ TC	20	MTCP2-015-3BD12 MTCP2-025-3BD18(C)	-		Y553(-A772)	-	GT0065 GT1028A	PDF
W286T	\$79.00	286T/ TC	21	MTCP2-020-3BD12 MTCP2-030-3BD18(C)	-		Y393(-A772)	-	GT0067 GT1031A	PDF
W324T	\$116.00	324T/ TC	30	MTCP2-040-3BD18(C)	-		Y571(-A774) Y513(-A775)	-	GT0073 GT1034A	PDF
W326T	\$116.00	326T/ TC	31	MTCP2-050-3BD18(C)	-		Y572(-A774) Y514(-A775)	-	GT0077 GT1037A	PDF
W364T	\$158.00	364T/ TC	43	MTCP2-060-3BD18(C)	-		Y573(-A774) Y515(-A775)	-	GT1040A	PDF
W365T	\$158.00	365T/ TC	43	MTCP2-075-3BD18(C)	-		Y574(-A774) Y516(-A775)	-	GT1043A	PDF
W404T	\$193.00	404T/ TC	58	-	-		-	-	-	PDF
W405T	\$193.00	405T/ TC	60	MTCP2-100-3BD18(C)	-		Y575(-A774) Y517(-A775)	-	GT1046A	PDF
W444T	\$219.00	444T	63	MTCP2-125-3BD18	-		-	-	GT1049A	PDF
W445T	\$219.00	445T	65	MTCP2-150-3BD18	-		-	-	GT1052A	PDF
W447T	\$288.00	447T	89	MTCP2-200-3BD18	-		-	-	GT1055A	PDF
W449T	\$288.00	449T	94	MTCP2-250-3D18 MTCP2-300-3D18	-		-	-	-	PDF

* IronHorse MTR2 56HC motors have double-punched bases to fit on slide base [MTA-BASE-W56](#).

STABLE™ Motor Slide Bases

Mounting Slide Bases for 56 to 215T NEMA Motors Features

STABLE Motor Slide Bases for 1-phase Motors									
Part Number	Price	Fits Frame Type	Product Wt. (lb)	Fits Motor					
				IronHorse	Leeson®	Marathon			
					Washguard®	Marathon DP GP (NEMA Service Factor)	Marathon DP Air Compressor	Fan & Blower	Marathon TE GP 4-in-1
<u>MTA-BASE-W56</u>	\$14.00	56*	2.8	MTR2-xxx-1AB18 MTR2-xxx-1AB36 MTPM-xxx-1L18 MTPM-xxx-1M18	112431.00	<u>C158A</u>	D010 C169 C704 D017	C216	<u>G570</u>
					112527.00	<u>G915A</u>		D311	<u>D311</u>
					112528.00	<u>C175A</u>		<u>C1153</u>	<u>G571</u>
					112529.00	<u>C167A</u>		<u>C1155</u>	<u>D312</u>
					113583.00	<u>C179A</u>		<u>B319</u>	<u>G572</u>
					114311.00	<u>G937A</u>		D118	<u>D313</u>
					114313.00	<u>C185A</u>		<u>C1158</u>	<u>G573</u>
					114317.00	<u>C187A</u>		<u>C235</u>	<u>D314</u>
					191475.00	<u>C193A</u>		D115	<u>G574</u>
					191477.00	<u>E261A</u>		<u>C1160</u>	<u>D315</u>
					191479.00	<u>E268A</u>		<u>C1161</u>	<u>G575</u>
						<u>EG277A</u>		<u>B352</u>	<u>D316</u>
					<u>MTA-BASE-W143T</u>	\$26.00		143T / TC	4.6
<u>MTA-BASE-W145T</u>	\$26.00	145TC / TC	5.1	-	-	<u>C191</u> <u>I127</u> <u>C194</u>	-	-	-
<u>MTA-BASE-W182T</u>	\$35.50	182T / TC	9.2	-	-	-	-	-	-
<u>MTA-BASE-W184T</u>	\$35.50	184 / TC	10	MTF-00x-1C18	-	-	<u>Z502</u>	-	-
<u>MTA-BASE-W213T</u>	\$52.00	213T / TC	13	-	-	-	-	-	-
<u>MTA-BASE-W215T</u>	\$52.00	215T T TC	15	-	-	-	-	-	-

* IronHorse MTR2 56HC motors have double-punched bases to fit on slide base [MTA-BASE-W56](#).